DRAFT

ENVIRONMENTAL ASSESSMENT

PROPOSED EXPANSION OF SANDELIN'S VELVET RIDGE ALTERNATIVE LIVESTOCK OPERATION

AUGUST 2000

Montana Fish, Wildlife & Parks
Region 1
490 North Meridian Road
Kalispell, Montana 59901

Flathead

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INTRODUCTION

Montana Fish, Wildlife & Parks (FWP) is required to perform an environmental analysis in accordance with the Montana Environmental Policy Act (MEPA) for each proposal for projects, programs, legislation, and other major actions of state government significantly affecting the quality of the human environment (Administrative Rules of Montana [ARM] 12.2.430). FWP uses environmental assessments (EAs) in the Alternative Livestock Operation licensing process to identify and evaluate environmental impacts of a proposed Alternative Livestock Operation. EAs also determine whether the impacts would be significant and whether, as a consequence, FWP would perform a more detailed environmental impact statement (EIS).

When preparing an EA, FWP reviews environmental impacts of the Proposed Action, impacts of the No Action Alternative, and impacts of other alternative actions which include recommended and/or mandatory measures to mitigate the project's impacts. A mitigated EA includes alternatives with enforceable requirements (stipulations) which reduce impacts of the Proposed Action below the level of significance. The EA may also recommend a preferred alternative for the FWP decision maker.

This EA is prepared by FWP for a proposed expansion of Sandelin's Velvet Ridge Alternative Livestock Operation located near Whitefish, Montana based on its review of the alternative livestock operation license application.

OBJECTIVES

This EA has been prepared to serve the following purposes in accordance with FWP MEPA rules (ARM 12.2.430):

- ensure that FWP uses natural and social sciences in planning and decision making;
- to be used in conjunction with other agency planning and decision-making procedures to make a determination regarding the Proposed Action;
- assist in the evaluation of reasonable alternatives and the development of conditions, stipulations, and modifications to the Proposed Action;
- determine the need to prepare an EIS through an initial evaluation and determination of the significance of impacts associated with the Proposed Action;
- ensure fullest appropriate opportunity for public review and comment on the Proposed Action; and
- examine and document the effects of the Proposed Action on the quality of the human environment.

PUBLIC PARTICIPATION

Public involvement in the EA process includes steps to identify and address public concerns. The Draft EA will be available for public review and comment from August 4, 2000 until 5 pm August 25, 2000 from the Region 1 FWP office. Comments regarding this EA should be submitted to FWP at the location specified below:

Mr. Dan Vincent, Regional Supervisor
Fish, Wildlife & Parks, Region 1
490 North Meridian Road
Kalispell, Montana 59901
Phone: (406) 752-5501

PROPOSED ACTION AND ALTERNATIVES

PROPOSED ACTION

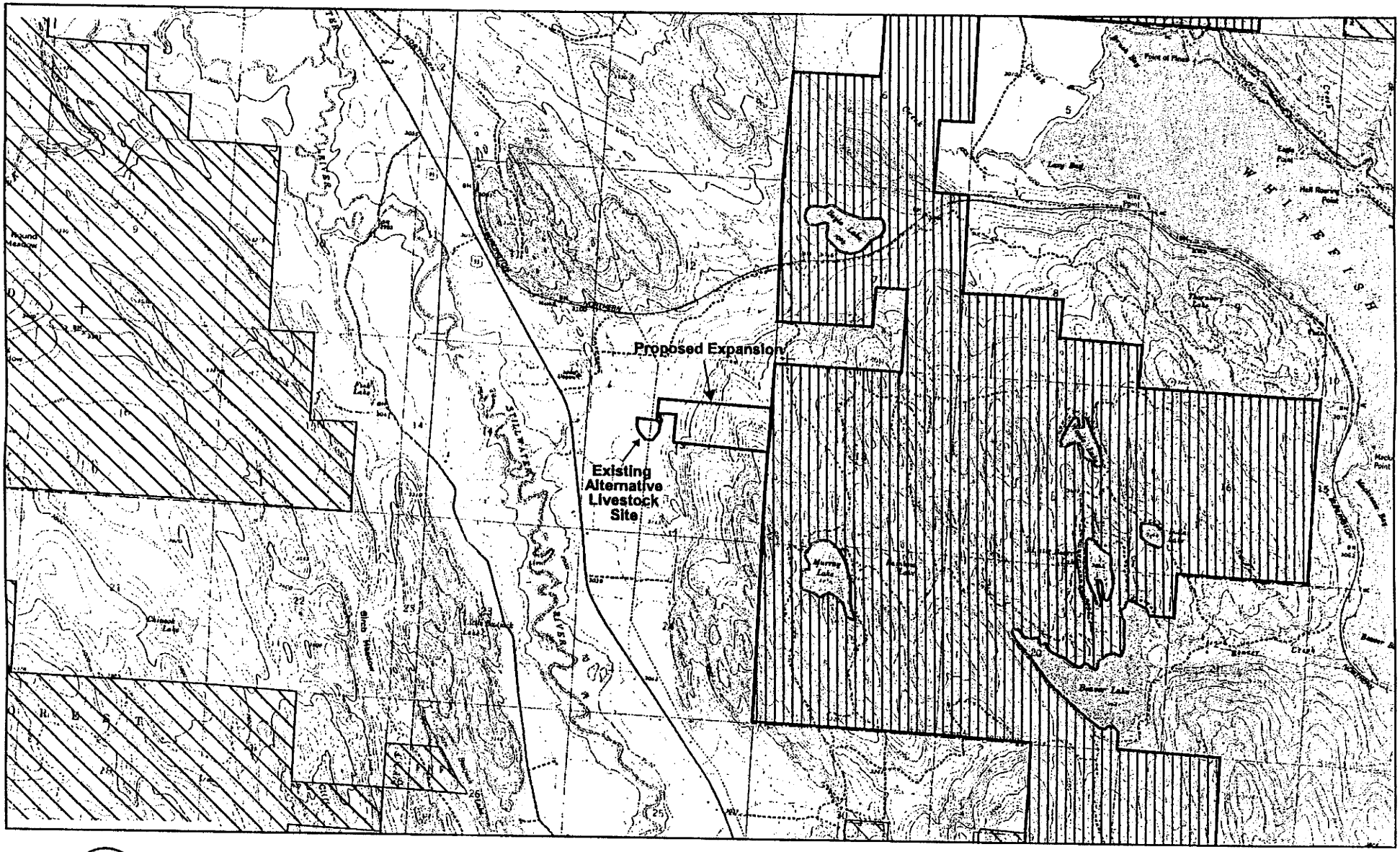
FWP received an initial application dated April 14, 2000 from Jay and Kylanne Sandelin to expand their alternative livestock facility in Flathead County, Montana. FWP received the application on April 19, 2000, and accepted the application as complete in a letter to the Sandelins dated May 17, 2000. The proposed expansion to the Velvet Ridge alternative livestock facility is located approximately 12 miles northwest of the town of Whitefish, Montana. The property is located on a tributary of Tamarack Creek, about 1 mile upstream of the creek's confluence with the Stillwater River (Figure 1). The applicants (Sandelin) live adjacent to the proposed expansion site (Figure 2).

The proposed expansion site is located immediately west of the existing licensed alternative livestock facility (license no. 134) (Figure 2). The proposed alternative livestock facility is located in the NE¼ of Section 13, Township 31 North (T31N), Range 23 West (R23W) and would add 80 acres to the existing 12-acre facility. The existing facility is licensed for up to 20 elk in the NW¼ of Section 13, T31N, R23W. An EA and Decision Document were prepared by FWP in 1997 for the 12-acre alternative livestock facility.

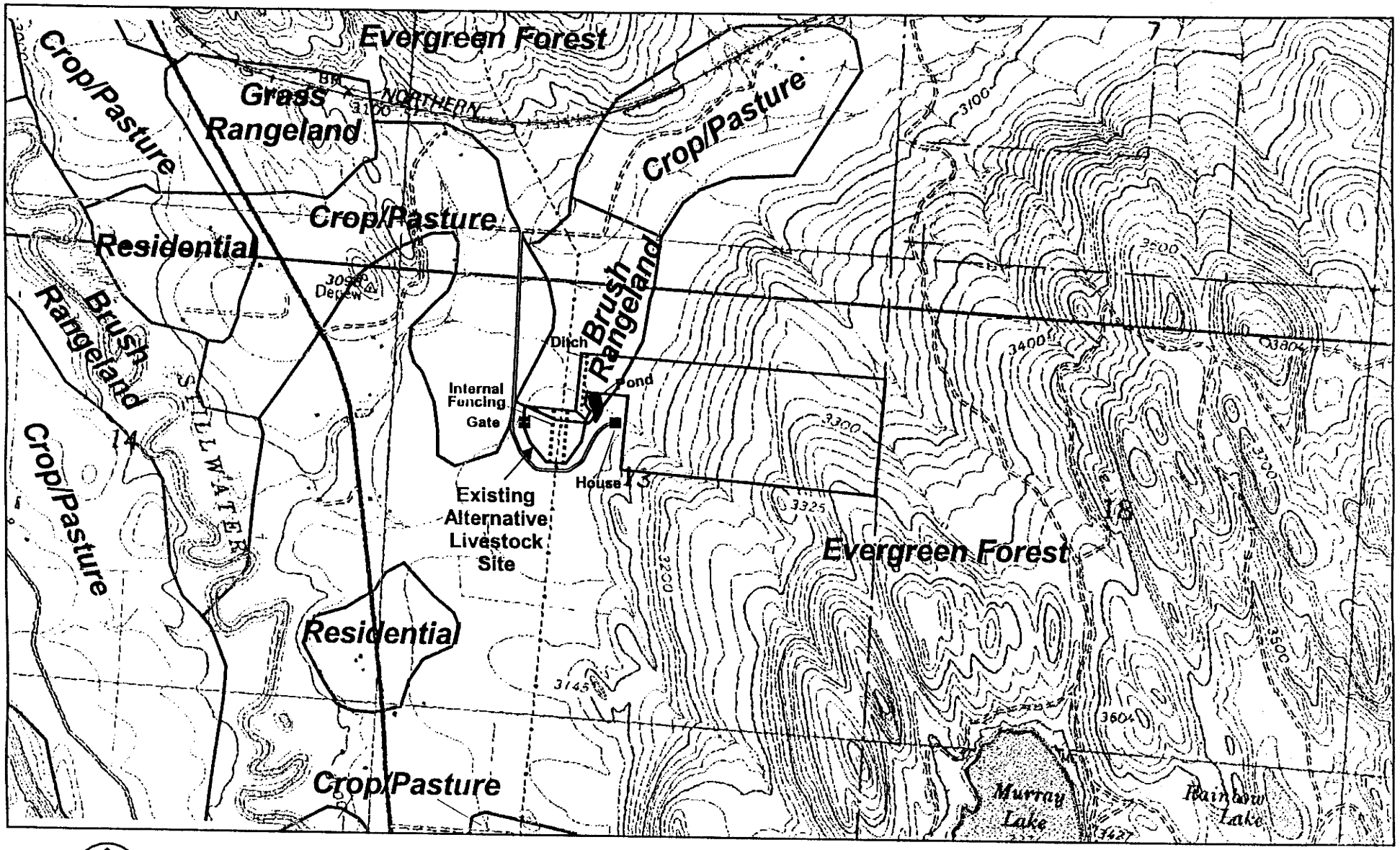
The applicants propose that up to 160 alternative livestock be allowed in the 80-acre expansion area on a year-round basis, including 110 elk, 10 white-tailed deer, 10 mule deer, 10 caribou, 10 bighorn sheep, and/or 10 mountain goats. The species distribution, however, would be subject to change based on future market conditions. The expansion is expected to be completed by the fall of 2002. The combined existing and proposed alternative livestock facility would contain up to 180 alternative livestock on 92 acres.

Purposes of the proposed alternative livestock facility include: breeding stock, meat and antler production, trophy sales, and other activities such as photography. The applicants have indicated, however, that shooting of alternative livestock by the public would not be allowed at the site. Alternative livestock to occupy the expanded facility would be procured from licensed facilities; however, none have been identified at this time. Wild animals would be removed from the enclosure prior to licensing by FWP.

Fence construction would be completed in accordance with requirements of FWP under ARM 12.6.1531. Fencing would consist of 8-foot high, high-tensile, Tightlock steel wire fencing on steel posts, with higher fencing on steep slopes. The fence bottoms would be installed to provide not more than 3 inches of ground clearance. No exterior gates would be constructed for the proposed expansion fence (expansion area would be connected to the existing 12-acre facility (Figure 2)). A handling and quarantine facility located in Sandelin's existing 12-acre alternative livestock facility would be used for the proposed new facility.



Site Map
Sandelin - Velvet Ridge
Alternative Livestock Operation Expansion EA
Flathead County, Montana
FIGURE 1



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Note: Land Use Information Derived From Montana Public Lands U.S. Bureau of Land Management 1:250,000 Scale Maps. Topographic Base Derived From U.S.G.S. 1:24,000 Scale Maps.

- Residential
- Crop/Pasture
- Grass Rangeland
- Brush Rangeland
- Evergreen Forest

Land Use / Land Cover
Sandelin - Velvet Ridge
Alternative Livestock Operation Expansion EA
Flathead County, Montana
FIGURE 2

ALTERNATIVES

One alternative (No Action alternative) is evaluated in this EA. Under the No Action alternative, FWP would not issue a license for expanding the existing 12-acre Sandelin alternative livestock operation as proposed. Therefore, no alternative livestock would be placed in the proposed enclosure. Implementation of the No Action alternative would not preclude other activities allowed under local, state, and federal laws to take place at the proposed alternative livestock site.

PURPOSE AND NEED OF THE PROPOSED ACTION

Expansion of the existing Sandelin alternative livestock operation would be a private commercial enterprise that would provide for breeding stock, meat production, and antler production. These activities do not currently occur at the property for which the proposed operation would be located; however, they do occur on the existing 12-acre alternative livestock facility located adjacent to the proposed enclosure.

ROLE OF FWP AND DOL

Montana Fish, Wildlife & Parks (FWP) is the lead agency in preparing this EA for the proposed project. This document is written in accordance with the Montana Environmental Quality Council (EQC) MEPA Handbook and FWP statutory requirements for preparing an EA under Title 75, Chapter 1, Part 2 Montana Code Annotated (MCA) and FWP rules under ARM 12.6.1520 et seq. The FWP has primary jurisdiction over alternative livestock sites with regard to licensing, reports and record keeping, exterior fencing, removal of game animals, inspection, and enforcement of these functions (87-4-408, MCA).

FWP shares regulatory responsibilities for new and expanding alternative livestock operations with the Montana Department of Livestock (DoL). The DoL is responsible for regulating the health, transportation, and identification of alternative livestock (87-4-408, MCA). Rules for DoL to implement regarding alternative livestock facilities are included in ARM 32.4.101 et seq. During the application process, all quarantine area plans and specifications are submitted to DoL for approval.

PRIOR ENVIRONMENTAL REVIEW AND LICENSE

The existing 12-acre alternative livestock facility (Figure 2) owned and operated by Jay Sandelin was subject to an EA completed by FWP in 1997. The EA included an evaluation of potential impacts to the physical environment (land, air, water, vegetation, fish, and wildlife) and human environment (noise, land use, risk/health, community, public service/taxes/utilities, aesthetics/recreation, and cultural/historic resources). A Decision Document was completed by FWP July 1997 to allow up to 20 elk in the 12-acre enclosure. License no. 134 was granted to Jay Sandelin for the 12-acre alternative livestock facility (previously referred to as "game farm"), with the most recent license renewal dated March 2, 2000. Five stipulations are included with the Decision Document and license:

1. Licensee must report to FWP the ingress of any game animal or any predators of ungulates (e.g., mountain lion, black bear, grizzly bear or coyote) immediately upon the discovery, and the reason for such ingress.

2. The applicants shall submit and obtain FWP's approval prior to licensing for a plan to address snow accumulation. The plan shall provide for an increased fence height of 10 feet along the portion of the

northern boundary of the game farm that extends west of the existing power line corridor and propose other measures suitable to control the height of packed snow.

3. A 25-foot vegetative buffer zone will be maintained between the north perimeter of the game farm fence and the adjacent property line. (Note: the purpose of this buffer zone is to filter out sediment, nutrients, and microorganisms from runoff that may come from the enclosure area).

4. FWP has conducted a MEPA review based upon the number of animals (20) and game farm acreage (12) specified in the license application. A supplemental MEPA review may be required if the applicant increases the number of animals above 20 or fails to fence the entire 12 acres. Fence construction must be completed no later than July 1999.

5. Licensee is authorized by the Department of Livestock to use quarantine facilities at the Grant Spoklie game farm (license #126) until on-site facilities are constructed. Licensee must complete construction of on-site quarantine facilities by December 5, 1998.

Key environmental impacts noted in the EA for the 12-acre alternative livestock operation include the following:

- Wild animals such as native elk, black bears, mountain lions, and coyotes can be attracted to the alternative livestock facility due to the availability of food and potential breeding opportunities. There is the concern of disease transmission to wild populations and also genetic pollution should wild and captive animals interbreed.

- The enclosure will exclude native wildlife from using 12 acres of habitat that is currently considered winter range for white-tailed deer, elk, and moose.

- Potential for impacts to surface water and groundwater quality in the vicinity of the alternative livestock facility, including a wetland area within the enclosure.

- Potential for significant accumulations of compacted snow along the fence line, increasing the risk of ingress and egress.

For the 1997 EA, a total of five written comments and one verbal comment were received by FWP during the public comment period.

AFFECTED ENVIRONMENT

The proposed Sandelin expansion of the Velvet Ridge alternative livestock facility is located on leased land about 12 miles northwest of Whitefish, Montana. This section summarizes primary environmental resources in the project area.

LAND RESOURCES

The proposed expansion is located on approximately 80 acres of primarily forested land on the flanks of a north-south trending ridge. The property lies on the northwest and northeast facing slopes of the ridge, with the ridge bisecting it near the eastern property boundary. Slopes range from flat in the northwestern corner to nearly vertical with rock outcrops occurring in the southern portion of the enclosure. The majority of the site is in the moderate slope class (between 20 and 40 percent, or 11 to 22 degrees).

This area was historically used for timber production and livestock grazing. Soils have developed on glacial till and have medium textured surface layers. Soil units are mantled and are highly productive if soil surface layers are not displaced or removed. Wet soil, such as that found in the western lowland portion of the site, generally has low strength and compacts easily.

WATER RESOURCES

Surface water in the proposed expansion area consists of some overland flow during spring runoff that flows north and west along the western portion of the property. This water drains toward Tamarack Creek which is tributary to the Stillwater River, located approximately 1 mile west of the alternative livestock site (Figure 1). One man-made pond (Figure 2) exists outside the proposed enclosure in the western portion of the property that is fed by a spring. Subsurface water flows into a man-made ditch channel along the western fenceline of the property (Figure 2). Direction of groundwater flow in the vicinity of the proposed alternative livestock facility is northwesterly toward Tamarack Creek. Depth to unconfined groundwater in unconsolidated alluvial and glacial sediments in the western portion of the proposed enclosure near the valley bottom is relatively shallow (10 to 30 feet). Depth to the primary water-producing zone (bedrock) ranges from 50 to 150 feet. During the spring runoff period, sediment in low-lying areas on the west side of the site can become saturated to the surface, and surface water can leave the enclosure area.

Montana's Section 303(d) list shows that the lower section of the Stillwater River adjacent to and downstream of the alternative livestock site (44.1-mile reach of B-2 use classification) is impaired for aquatic life, cold water fisheries, and drinking water. Numerous water rights are held for groundwater wells and surface water (Tamarack Creek and Stillwater River) within a mile of the proposed alternative livestock facility.

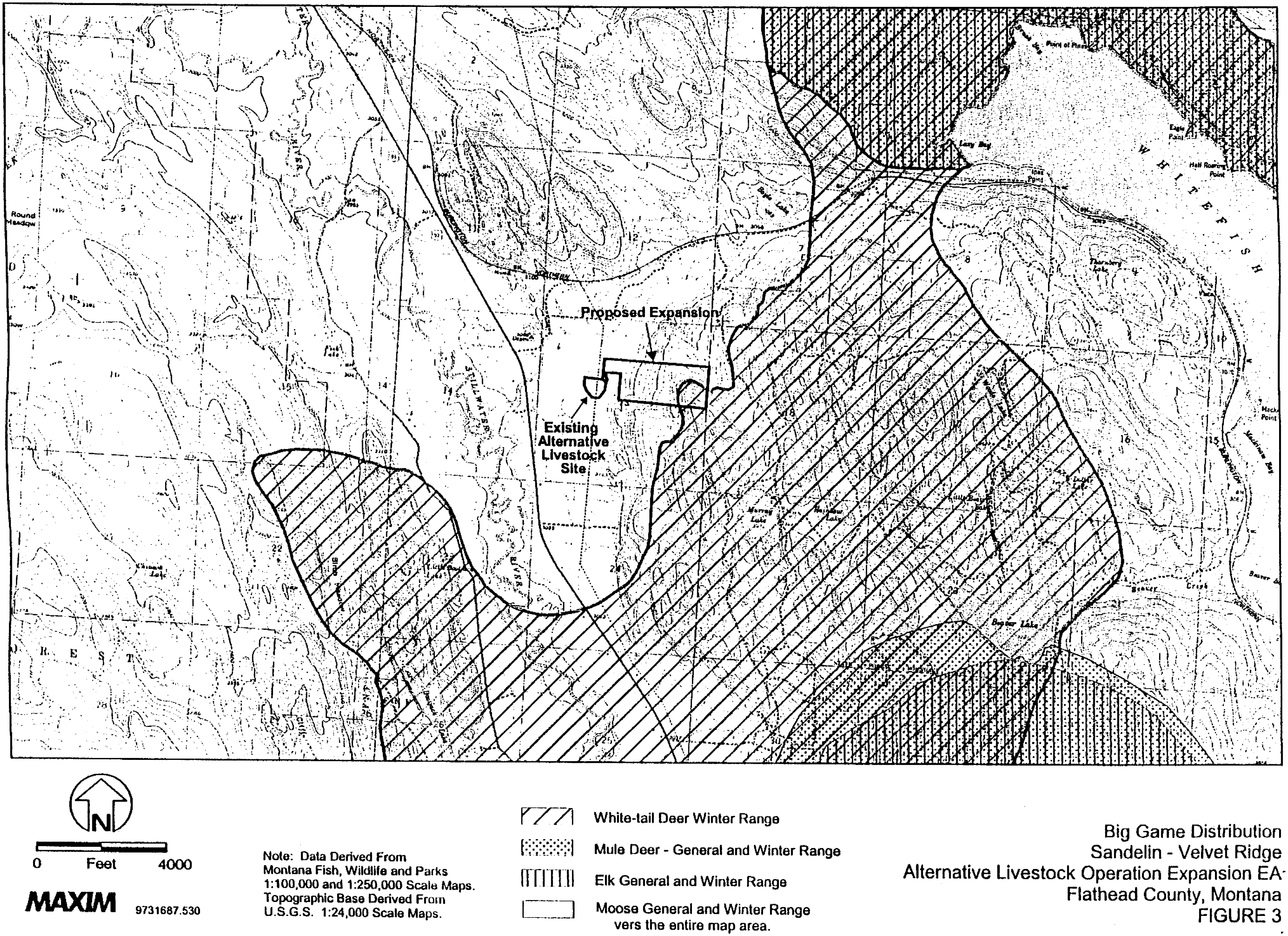
VEGETATION RESOURCES

Most of the proposed enclosure area is forested, consisting primarily of mature Douglas-fir, lodgepole pine, and interspersed western larch. Young Douglas-fir regeneration is found in pockets scattered throughout the upper portions of the property. Understory vegetation in the forested portion includes pinegrass, snowberry, common juniper, arnica, spirea, and various additional grasses and forbs. The property has been recently thinned (logged) and canopy coverage is currently estimated at approximately 40 percent; though small 1 to 2 acre openings are also dispersed across the area. A small area (2 to 5 acres) of brush rangeland, including some wetlands, occurs in the northwest corner of the proposed enclosure (Figure 2).

Forage production for the proposed expansion area is estimated at 1,000 to 1,200 pounds per acre; therefore, total forage for the proposed 80-acre enclosure is about 80,000 to 96,000 pounds (40 to 48 tons) on an annual basis. No federally-listed threatened or endangered plant species were observed within the proposed enclosure site. The proposed site does contain noxious weeds (e.g., Canada thistle), especially in previously logged areas and along old skid roads.

WILDLIFE RESOURCES

The proposed site and surrounding land is used by white-tailed deer, elk, moose, and mule deer during all or parts of the year. Winter range for white-tailed deer has been delineated adjacent and to the south and east of the property (Figure 3). Elk also use the area during some winters, and known elk and mule deer winter range is located approximately 2 miles from the property on the north shore of Whitefish Lake and 2 miles southeast of the property to the south of Beaver Lake (Figure 3). Moose likely are transient in the area during part of the year. Other wildlife species known or expected to use the area, at least on a transient basis, include black bear, grizzly bear, mountain lion, coyote, and fox. Gray wolves (Whitefish wolf pack home range), bald eagles, and lynx are Federally listed as threatened or endangered and may also be transient through the general area (Tim Thier, FWP, pers. comm., 2000).



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Note: Data Derived From
Montana Fish, Wildlife and Parks
1:100,000 and 1:250,000 Scale Maps.
Topographic Base Derived From
U.S.G.S. 1:24,000 Scale Maps.

Big Game Distribution
Sandelin - Velvet Ridge
Alternative Livestock Operation Expansion EA
Flathead County, Montana
FIGURE 3

LAND USE/COMMUNITY

Most land immediately surrounding the proposed alternative livestock facility is public (state owned; managed by the Montana Department of Natural Resources and Conservation) and private timberland and pasture which is grazed by domestic livestock (Figure 1). Land in the general area has historically been used by local farmers and ranchers, though recent ingress of residents on smaller subdivided parcels has also occurred on private land to the north, west, and south of the site. The two nearest permanent residences (other than Sandelin) are located approximately ¼-mile west of the site. Highway 93 is located approximately ½-mile west of the site (Figures 1 and 2).

RISK/HEALTH HAZARDS

Domestic livestock are currently pastured in the vicinity of the property. There are resident populations of elk and deer in the vicinity of the proposed enclosure. These domestic and wild animals located outside of the proposed enclosure potentially could be subject to disease transmission and/or hybridization from the alternative livestock. In addition, several residents are sparsely located within a mile of the facility that could be indirectly exposed to health hazards from the proposed alternative livestock facility.

ENVIRONMENTAL CONSEQUENCES

Only primary resources that have potential adverse effects from the Proposed Action are summarized in this section. A detailed discussion of environmental consequences is contained in *Part II* of this EA.

LAND RESOURCES

Environmental impacts to land and soil resources associated with the Proposed Action of raising up to 160 animals on the 80-acre expansion area are expected to be minor with respect to land and soil resources. Primary impacts would be associated with soil compaction potential in the western portion of the proposed enclosure where wet conditions are present, and the potential for reduced vegetative cover throughout the site. Where soil becomes exposed, which could occur if the stocking rate and/or lack of animal dispersal removes vegetative cover, the potential for erosion exists, primarily on the steeper slopes.

WATER RESOURCES

Increased runoff and erosion could occur in some areas of the proposed enclosure if pasture use is such that vegetative cover is diminished. The proposal to pasture up to 160 alternative livestock on the site would reduce vegetative cover. Areas of the enclosure that would be most susceptible to erosion problems are on the steep slopes, wet areas, and along the ditch channel banks. The extent to which erosion would occur is dependent primarily on animal density, season, and duration of use. The exterior enclosure fence would not cross any perennial streams or ponds. Runoff from the southern portion of the enclosure would enter the pond outside the west fence line, and from the northern portion, runoff would enter the ditch along the inside of the northwest fence line (Figure 2). Therefore, surface water would leave the immediate area only during extreme precipitation events or periods of snowmelt.

Alternative livestock fecal matter and nutrient-enriched water may have a minor effect on the quality of water in the vicinity of the alternative livestock site (dependent upon animal density and waste management practices), primarily during periods of snow-melt and major precipitation events. As stated above, however, surface runoff would not leave the immediate area during most of each year, and groundwater is in confined, semi-confined, and/or low-permeable clayey glacial deposits.

VEGETATION RESOURCES

The occupancy period for alternative livestock would be on a year-long basis. The proposed site would supply an estimated 20 percent of forage needs when fully stocked with 160 animals. The maximum stocking rate of approximately 2 animals per acre is considered high under existing vegetative conditions and would contribute to the long-term decline of vegetation resources on the site, both in terms of plant species composition and productivity. Supplemental feed would be needed to sustain the animals during the non-growing season and some feed should be provided during the growing season to help reduce animal use of the native vegetation and to reduce potential impacts on ground cover. There are no plans to physically alter the native plant communities on the proposed facility (i.e., crop or hay cultivation). There are no known threatened or endangered plant species in this area.

Noxious weed spread is possible at this site and, under an intensive grazing regime, with no weed management, would be expected to invade and subsequently increase in abundance. Weeds would spread quickly to disturbed areas around any site that animals are fed or handled. Weed seeds could be imported into the area with animal feed. The applicant would develop and implement a weed control program on the ranch, including vegetative seeding of exposed areas. If BMPs are properly implemented and a reasonable stocking rate is maintained as proposed by the applicants, impacts to vegetation would be minor.

WILDLIFE RESOURCES

The exclusion of wild game from 80 additional acres would displace a few resident deer, elk, and moose from moderate to good quality habitat in the drainage. Game moving through the area would be forced to travel a minimal distance to get to the same point(s) along the travel routes. Mountain lions, bears, and wolves would likely pass through this area and may be attracted to the alternative livestock.

The proposed enclosure fence crosses moderate (10 to 40 percent) to steep (100+ percent) slopes. Steep, irregular topography can present wildlife and alternative livestock with a topographic advantage to jump game-proof fencing. The potential for significant impacts to area wildlife due to ingress/egress risk would be mitigated to minor through strict adherence to fence construction, maintenance, and monitoring procedures.

A potentially significant concern regards the escape of captive elk and the potential for interbreeding of wild elk with domestic elk whose genetic make-up has been altered through several generations of selective breeding or through interbreeding with domestic red-deer. Although red deer are now prohibited species in Montana, historically some alternative livestock operators did bring red-deer or red-deer hybrids into their facilities. The concern regarding red deer hybrids is partially mitigated through current regulations. Although the impact of genetic pollution on wild elk herds is unknown, the effect is undesirable in terms of maintaining the genetic integrity of existing populations.

LAND USE/COMMUNITY

The proposed expansion would be compatible with existing agricultural land uses. The alternative livestock facility would result in the conversion of about 80 acres of forested timber and grazing land to primarily grazing land. With respect to land use, no significant conflicts should result between operation of the ranch and the agricultural or residential areas. Additional homes could be constructed in the vicinity of the facility on private land. Potential effects of the alternative livestock facility on adjacent property values is difficult to evaluate because some nearby property owners may like the idea of the expansion, whereas others might find it undesirable.

Some local residents may feel the alternative livestock operation would decrease their quality of life. Neighbors harboring negative feelings about the operation would perceive a loss in their sense of social well-being. However, some neighbors and local residents may like the idea of an alternative livestock facility and enjoy viewing the elk. These people may feel the facility would add to their quality of life.

RISK/HEALTH HAZARDS

There is potential for transmission of water-borne disease pathogens, if present, to be transported into and out of the ranch, primarily from the ephemeral tributary to Tamarack Creek. This is expected to be a minor risk because of current animal disease testing requirements and lack of surface water flow from the site, except during conditions of significant precipitation events and snowmelt (spring runoff). The route of chronic wasting disease (CWD) transmission at this time is unknown; therefore, the potential for transmission by soil, water, or other media cannot be determined, nor impacts disclosed.

The risk of disease (e.g., brucellosis and tuberculosis) being passed from alternative livestock to wildlife and domestic livestock would be minimal if fence integrity is maintained and the stipulations and/or mitigation measures described in this EA are followed. Potential for disease transmission from ranch animals is also mitigated through DoL disease testing requirements. Each facility is required to have access to an isolation pen (quarantine facility) on the property or an approved quarantine plan to isolate any animals that are imported or become ill. Steep slopes, snow drift-prone areas, and trees along the perimeter fence of the proposed enclosure have the potential to affect fence integrity.

There is some risk of infection to hunters who field dress deer or elk infected with tuberculosis or brucellosis. Routine brucellosis and tuberculosis testing requirements for alternative livestock offer a measure of surveillance that minimizes that risk. Another potential risk to human health would be the attraction of predators to the proposed enclosure and the proximity of residences to the site. Therefore, increased encounters between predators (e.g., mountain lions and bears) and humans could occur as a result of the expanded enclosure area.

CUMULATIVE EFFECTS

The Proposed Action would add to impacts associated with the existing alternative livestock facility (license no. 134) located immediately west of the proposed facility (Figure 2). The existing operation is licensed for up to 20 elk on 12 acres. This facility, in combination with the proposed alternative livestock operation, could result in up to 180 alternative livestock on 92 acres in the Stillwater River Valley. The Spoklie Tobie Creek alternative livestock facility is located approximately 7 miles southwest, and the Tutvedt BCD alternative livestock facility is located about 15 miles south of the Velvet Ridge site. The Proposed Action would result in potential impacts that are individually minor, but not cumulatively significant.

EA CONCLUSION

MEPA and alternative livestock licensing statutes require FWP to conduct an environmental analysis for proposed alternative livestock operations as described in the *Introduction* of this *Summary* section (p. 1). FWP prepares EAs to determine whether a project would have a significant effect on the environment. If FWP determines that a project would have a significant impact that could not be mitigated to less than significant, then FWP would prepare a more detailed EIS before making a decision.

Based on the criteria evaluated in this EA, an EIS would not be required for the proposed expansion of Sandelin's Velvet Ridge alternative livestock facility. The appropriate level of analysis for the Proposed Action is a mitigated EA because all impacts of the Proposed Action have been accurately identified in the EA, and all identified significant impacts, if any, would be mitigated to minor or none.

STIPULATIONS AND MITIGATION MEASURES

The stipulations and mitigation measures described in this section address potential impacts identified for the proposed expansion of Sandelin's Velvet Ridge alternative livestock operation. FWP would require stipulations to ensure that the fence enclosure is maintained in game-proof condition. Potential minor impacts from the Proposed Action are addressed as mitigation measures that are strongly recommended to remain in compliance with state and federal environmental laws, but are not required.

REQUIRED STIPULATIONS

Five stipulations are listed on pages 5 and 6 of this EA that are part of license no. 134 for the existing 12-acre alternative livestock facility. Three of these stipulations, with some wording modification, would be continued for the proposed expansion (including the existing 12-acre facility). The other two previously specified stipulations are not continued because they are either addressed in current statute and/or rule, or have already been satisfied as part of previous operations. The following three stipulations are continued from the license for the existing 12-acre operation:

1. The applicants shall submit and obtain FWP approval prior to licensing for a plan to address snow accumulation. The plan shall provide for an increased fence height of 10 feet along any portion of the perimeter fenceline that may be subject to excessive snow accumulation during a typical winter. Other suitable measures can be proposed to control the height of packed snow along the perimeter fence.

2. A 25-foot vegetative buffer zone shall be maintained between the northern perimeter of the existing 12-acre portion of the alternative livestock enclosure and the adjacent property line. (Note: the purpose of this buffer zone is to filter out sediment, nutrients, and microorganisms from runoff that may come from the enclosure area).

3. FWP and DoL have conducted a MEPA review based upon the number of alternative livestock (180) and acreage (92) specified in the license application. A supplemental MEPA review may be required if the applicant increases the number of animals above 180 or fails to fence the entire 92 acres.

In addition to the three stipulations listed above, two more stipulations would be required for the expanded Velvet Ridge alternative livestock facility to ensure the perimeter fence is maintained in game-proof condition:

4. Licensee shall inspect the perimeter fence on a regular basis (e.g., weekly) and immediately after or during events that have a greater probability of damaging the fence (e.g., wind storms and significant precipitation events) to ensure fence integrity with respect to falling trees, surface water runoff, burrowing animals, predators, and other game animals. Fence inspection shall follow a written fence monitoring plan that is submitted to and approved by FWP prior to issuance of the license. If major repairs are required of the perimeter fence due to falling tree(s) or heavy runoff, no alternative livestock shall be placed back into the affected pasture(s) until the fence is inspected for game-proof condition by a FWP representative. Additional remedial actions may be required by FWP if ingress or egress occurs at the facility.

5. Upon concurrence with a FWP representative, perimeter fence height shall be increased to a minimum of 10 feet in areas of steep slopes (>50 percent or 30 degrees).

The stipulations listed above are imposed to mitigate a potentially significant risk to fence integrity and the resulting potential for ingress/egress of alternative livestock and wildlife. Without these requirements, risk to livestock and wildlife from contact with alternative livestock would have the potential to be significant, due to the site being located in an area currently utilized by wild game and predators. Regular fence monitoring and a written fence monitoring plan are required so that FWP has a level of confidence that potential fence integrity problems can be detected and corrected promptly before ingress or egress problems occur. These stipulations would apply to the existing 12-acre enclosure, as well as the proposed 80-acre enclosure.

RECOMMENDED MITIGATION MEASURES

The following recommended mitigation measures address minor impacts identified in this EA for the proposed expansion of the Velvet Ridge alternative livestock facility for resources that have the potential to be affected by the Proposed Action:

Land Resources

- Maintain a reasonable stocking rate within the enclosure to minimize changes in soil structure and potential increases in runoff and erosion to surface water drainages from disturbed ground. A "reasonable stocking rate" could include internal fencing and rotational grazing strategies that limit periods of time that alternative livestock would be using any one pasture in order to reduce potential for devegetation and erosion.

Water Resources

- Maintain a reasonable stocking rate in the area to mitigate potential impacts from runoff and fecal matter. Potential water quality impacts also could be minimized by disposing of dead animals and excess fecal material at a site that is isolated from surface water and groundwater (disposal must meet county regulations for solid waste if applicable). On-site disposal of dead alternative livestock would be regulated by DoL under ARM 32.4.1002.

- For any areas that may have erosion and sedimentation problems, utilize best management practices (BMPs) where surface water could enter the ephemeral drainage channel, Tamarack Creek, and/or the Stillwater River. The BMPs may include earth berms, straw bale dikes, vegetative buffer zones, and/or silt fences to be used on a seasonal basis.

Vegetation Resources

- Monitor the alternative livestock site for invasion of noxious weeds and treat affected areas in a timely manner. Should noxious weeds continue to be detected, a weed control program should be implemented, if not already in place, to control the weeds.

- Provide certified weed-free supplemental feed and minerals to the alternative livestock on a seasonal basis to reduce excessive grazing on preferred pasture plants.

- Create/utilize interior pastures such that rotational grazing strategies can be implemented to reduce adverse impacts to vegetation. In particular, allow only seasonal use of saturated soil in wetland areas.

Wildlife Resources

- Store feed away from exterior fences or enclose in bear-resistant containers or buildings.
- Feed alternative livestock at interior portions of the enclosure and not along the perimeter fence.
- Remove dead animals, excess fecal material, and waste feed from the alternative livestock facility and deposit at a site not likely to be used by humans or domestic and wild animals.
- Set back perimeter fence at least 50 feet from state-owned land in areas of large trees to reduce potential risk of trees falling on fence.

Risk/Health Hazards

- Mitigation measures recommended above for *Water Resources* and *Wildlife Resources* are applicable to this section. In addition, risk of disease epidemic or heavy parasite infections among alternative livestock can be minimized by maintaining a reasonable stocking rate in relation to the enclosure size, periodic removal of manure from concentration areas, and development of a disease immunization and parasite treatment protocol as applicable to alternative livestock.

Cultural & Historical Resources

- If archeological artifacts are observed during construction of the enclosure fence or from other activities, work should stop in the area and the discovery reported to the Montana Historical Society in Helena. If work stoppage in the area containing observed artifacts is not possible, record the location and position of each object, take photographs and preserve the artifact(s).

PART I. ALTERNATIVE LIVESTOCK OPERATION LICENSE APPLICATION

Montana Fish, Wildlife & Park's authority to regulate alternative livestock operations is contained in sections

ENVIRONMENTAL ASSESSMENT CHECKLIST

87-4-406 through 87-4-424, MCA and ARM 12.6.1501 through 12.6.1519.

1. **Name of Project:** Expansion of Sandelin's Velvet Ridge Alternative Livestock Operation

   Date of Acceptance of Completed Application: May 17, 2000

2. **Name, Address and Phone Number of Applicant(s):**

   Jay & Kylanne Sandelin
   477 Tamarack Creek Road
   Whitefish, MT 59937 Ph. 406-862-1150

3. **If Applicable:**

   Estimated Construction/Commencement Date: Summer 2000

   Estimated Completion Date: Summer 2003

   Is this an application for expansion of existing facility or is a future expansion contemplated?

   Yes, expansion of existing 12-acre facility.

4. **Location Affected by Proposed Action (county, range and township):**
   Flathead County, 80 acres in the following:
   S½ of NE¼ of Section 13; Township 31 North, Range 23 West

5. **Project Size:** Estimate number of acres that would be directly affected that are currently:

   (a) Developed:
   residential....._____ acres
   industrial....._____ acres

   (b) Open Space/Woodlands/Areas...._____ acres

   (c) Wetlands/Riparian Areas..... 5 _____ acres

   (d) Floodplain..._____ acres

   (e) Productive:
   irrigated cropland._____ acres
   dry cropland..... _____ acres
   forestry..... 75 _____ acres
   rangeland..... _____ acres
   other....._____ acres

6. **Map/site plan:**

The following maps are included in the introductory summary of this EA:

Figure 1: Site Map
Figure 2: Land Use / Land Cover
Figure 3: Big Game Distribution

7. **Narrative Summary of the Proposed Action or Project including the Benefits and Purpose of the Proposed Action:**

FWP received an initial application dated April 14, 2000 from Jay and Kylanne Sandelin to expand their alternative livestock facility in Flathead County, Montana. FWP received the application on April 19, 2000, and accepted the application as complete in a letter to the Sandelins dated May 17, 2000. The proposed expansion to the Velvet Ridge alternative livestock facility is located approximately 12 miles northwest of the town of Whitefish, Montana. The property is located on a tributary of Tamarack Creek, about 1 mile upstream of the creek's confluence with the Stillwater River (Figure 1). The applicants (Sandelin) live adjacent to the proposed expansion site (Figure 2).

The proposed expansion site is located immediately west of the existing licensed alternative livestock facility (license no. 134) (Figure 2). The proposed alternative livestock facility is located in the NE¼ of Section 13, Township 31 North (T31N), Range 23 West (R23W) and would add 80 acres to the existing 12-acre facility. The existing facility is licensed for up to 20 elk in the NW¼ of Section 13, T31N, R23W. An EA and Decision Document were prepared by FWP in 1997 for the 12-acre alternative livestock facility.

The applicants propose that up to 160 alternative livestock be allowed in the 80-acre expansion area on a year-round basis, including 110 elk, 10 white-tailed deer, 10 mule deer, 10 caribou, 10 bighorn sheep, and/or 10 mountain goats. The species distribution, however, would be subject to change based on future market conditions. The expansion is expected to be completed by the fall of 2002. The combined existing and proposed alternative livestock facility would contain up to 180 alternative livestock on 92 acres.

Purposes of the proposed alternative livestock facility include: breeding stock, meat and antler production, trophy sales, and other activities such as photography. The applicants have indicated, however, that shooting of alternative livestock by the public would not be allowed at the site. Alternative livestock to occupy the expanded facility would be procured from licensed facilities; however, none have been identified at this time. Wild animals would be removed from the enclosure prior to licensing by FWP.

Fence construction would be completed in accordance with requirements of FWP under ARM 12.6.1531. Fencing would consist of 8-foot high, high-tensile, Tightlock steel wire fencing on steel posts, with higher fencing on steep slopes. No exterior gates would be constructed for the proposed expansion fence (expansion area would be connected to the existing 12-acre facility (Figure 2)). A handling and quarantine facility located in Sandelin's existing 12-acre alternative livestock facility would be used for the proposed new facility.

8. **Listing of any other Local, State or Federal agency that has overlapping or additional jurisdiction:**

(a) Permits:

Agency Name	Permit	Approval Date and Number
Department of Livestock	Approval of quarantine and handling facility	Using quarantine facility in nearby facility (license no. 134)

(b) Funding:

Agency Name	Funding Amount
None	

(c) Other Overlapping or Additional Jurisdictional Responsibilities:

Agency Name	Type of Responsibility
- Montana Department of Livestock (DoL)	disease control
- Montana Department of Environmental Quality (DEQ)	water quality, air quality waste management
- Montana State Historical Preservation Office (SHPO)	cultural resources
- Montana Department of Natural Resources and Conservation (DNRC)	water rights; floodplain development
- Natural Resource Conservation Service (NRCS)	soil conservation
- Flathead County Conservation District	stream crossings
- Flathead County Weed Control District	weed control
- Flathead County Tax Department	tax assessment

9. **List of Agencies Consulted During Preparation of the EA:**

Montana Department of Livestock
Montana Department of Environmental Quality
Montana State Historical Preservation Office
Montana Department of Natural Resources and Conservation

REFERENCES:

Sandelin, Jay & Kylanne, 2000. Application for Expansion of Velvet Ridge Alternative Livestock Operation, dated April 14, 2000.

PART II. ENVIRONMENTAL REVIEW

This section of the EA presents results of an environmental review of the proposed expansion of Sandelin's Velvet Ridge alternative livestock operation (Proposed Action). The assessment evaluated direct and indirect impacts and cumulative effects of the Proposed Action on the following resources of the physical environment: land, air, water, vegetation, fish and wildlife; and the following concerns of the human environment: noise, land use, human health risk, community impacts, public services and taxes, aesthetics and recreation, and cultural and historical resources. Impacts were determined to fall in one of four categories: unknown, none, minor and significant. For the purposes of this EA, and in accordance with ARM 12.6.1525, these terms are defined as follows:

EA DEFINITIONS

Cumulative Effects: Collective impacts on the physical and human environment of the Proposed Action when considered in conjunction with other past and present actions related to the Proposed Action by location or generic type. Related future actions must also be considered when these actions are under concurrent consideration by any state agency through pre-impact statement studies, separate impacts statement evaluation, or permit processing procedures.

Unknown Impacts: Information is not available to facilitate a reasonable prediction of potential impacts.

Significant Impacts: A determination of significance of an impact in this EA is based on individual and cumulative impacts from the Proposed Action. If the Proposed Action results in significant impacts that can not be effectively mitigated, FWP must prepare an EIS. The following criteria are considered in determining the significance of each impact on the quality of the human environment:

- severity, duration, geographic extent and frequency of occurrence of the impact;
- probability that the impact would occur if the Proposed Action occurs;
- growth-inducing or growth-inhibiting aspects of the impact, including the relationship or contribution of the impact to cumulative effects;
- quantity and quality of each environmental resource or value that would be affected, including the uniqueness and fragility of those resources or values;
- importance to the state and to society of each environmental resource or value that would be affected;
- any precedent that would be set as a result of an impact of the Proposed Action that would commit FWP to future actions with significant impacts or a decision in principle about such future actions; and
- potential conflict with local, state, or federal laws, requirements, or formal plans.

Reasonable Stocking Rate: The density of animals appropriate to maintain vegetative cover in pasture condition that minimizes soil erosion from major precipitation events and snowmelt. Factors to consider in determining an overall reasonable stocking rate include vegetation type and density, ground slope, soil type, and precipitation.

A. PHYSICAL ENVIRONMENT

1. LAND RESOURCES Will Proposed Action result in:	Impact				Can Impact be Mitigated	Comment Index
	Unknown	None	Minor	Potentially Significant		
a. Soil instability or changes in geologic substructure?		X				
b. Disruption, displacement, erosion, compaction, moisture loss, or over-covering of soil which would reduce productivity or fertility?			X		Yes	1(b)
c. Destruction, covering or modification of any unique geologic or physical features?		X				
d. Changes in siltation, deposition or erosion patterns that may modify the channel of a river or stream or the bed or shore of a lake?		X				

AFFECTED ENVIRONMENT:

The proposed expansion of the Velvet Ridge alternative livestock operation is located on approximately 80 acres of mainly forested land (Figure 2). The project site lies on the foot-slopes of a north-south trending ridge, with most of the proposed enclosure on the east-facing side of the ridge. The ridge rises from the valley floor of the Stillwater River, which flows approximately 1 mile west of the alternative livestock site, from an elevation of about 3,040 feet to 3,400 feet at the ridge-top. The western valley-bottom portion of the property is adjacent to the existing 12-acre alternative livestock facility (Figure 2). The hillsides are forested, and the valley bottom is primarily an agricultural and scattered residential area. The Stillwater State Forest boundary adjoins the eastern property boundary (Figure 1).

Glacial features in the area result from late Wisconsin-age alpine glaciers, which were present in the area (Johns, 1970). Most of the surrounding area is forested and either in private ownership or managed by the Stillwater State Forest. Bedrock is predominantly meta-sedimentary rock of the preCambrian-age Belt Series Formation. Hillslopes range from moderate to moderately-steep, with inclusions of vertical and near vertical rock outcrops occurring locally.

Soil information was obtained from the Soil Survey of the Flathead National Forest Area, Montana (USDA Forest Service, 1983). The soil survey was performed at an Order III level and is suitable for planning land use and the development of resources. Two soil map units were identified within the proposed enclosure: Andeptic Cryooboralfs-Andic Cryochrepts complex, hilly (23-8); and Aquepts, lacustrine substratum (14-3).

Andeptic Cryooboralfs-Andic Cryochrepts complex soils are present on the forested hillside. Soils have developed on glacial till and have medium textured surface layers. Volcanic ash influenced loess dominates the surface horizon. Subsoils contain large amounts of gravel (up to 80%), and vary in both texture and rock fragment content depending on slope location and slope. Aquepts generally have silt loam surface layers and silt in the subsurface. These soils were noted to be very soft and spongy during the site visit and may be saturated much of the year. Soils that are wet have low strength and compact easily (USDA Forest Service, 1983). Both soil units are highly productive if soil surface layers are not displaced or removed.

PROPOSED ACTION:

1(b) – The proposed alternative livestock ranch expansion would generally have minor impacts to land and soil resources if reasonable animal and land management are maintained. Greatest impacts would occur to the wetter soil in the northwest corner of the proposed enclosure, and during periods of heavy rain or snowmelt along fencelines on steep slopes. If vegetation canopy is considerably reduced, hoof activity in saturated soil and on the steeper slopes would result in excess compaction and loss of soil structure. The proposed alternative livestock expansion area does not contain any unique or significant soil or land resources that would be lost due to the proposed land use change.

NO ACTION:

Under the No Action alternative, the current condition of the land would not change relative to use by alternative livestock.

CUMULATIVE EFFECTS:

The Proposed Action would expand the existing 12-acre alternative livestock facility by an additional 80 acres, and result in up to 180 alternative livestock within the total enclosure area of 92 acres. The existing operation is licensed for up to 20 elk on 12 acres. As a result, cumulative impacts to land/soil resources could develop if the maximum stocking rate is attained; however, the magnitude of these effects is expected to be minor on a cumulative basis, assuming that a reasonable stocking rate and BMPs are utilized as necessary.

REQUIRED STIPULATIONS:

None

RECOMMENDED MITIGATION MEASURES:

Maintain a reasonable stocking rate within the enclosure to minimize changes in soil structure and potential increases in runoff and erosion to surface water drainages from disturbed ground. A "reasonable stocking rate" could include internal fencing and rotational grazing strategies that limit periods of time that alternative livestock would be using any one pasture in order to reduce potential for devegetation and erosion.

REFERENCES:

Johns, Willis M. 1970. Geology and Mineral Deposits of Lincoln and Flathead Counties, Montana. Montana Bureau of Mines and Geology, Butte, Montana, Bulletin 79. 182 pages with maps.

U.S. Department of Agriculture (USDA), Forest Service. 1983. Soil Survey of the Flathead National Forest Area, Montana. Albin Martinson and William Basko, authors. USDA Forest Service and Soil Conservation Service in Cooperation with Montana Agricultural Experiment Station. September.

2. AIR RESOURCES Will Proposed Action result in:	Impact				Can Impact Be Mitigated	Comment Index
	Unknown	None	Minor	Potentially Significant		
a. Emission of air pollutants or deterioration of ambient air quality? (also see 13 (c))		X				
b. Creation of objectionable odors?		X				
c. Alteration of air movement, moisture, or temperature patterns or any change in climate, either locally or regionally?		X				
d. Adverse effects on vegetation, including crops, due to increased emissions of pollutants?		X				

AFFECTED ENVIRONMENT:

The proposed alternative livestock site is situated in the Stillwater River Valley approximately 12 miles northwest of Whitefish. Scattered residences are located within 1 mile to the north, south, and west of the proposed enclosure. Highway 93 is located approximately ½-mile west of the alternative livestock facilities (Figures 1 and 2). The area has no apparent history of air quality problems, and is not classified for air quality attainment status (Montana DEQ, 1997). The addition of 160 alternative livestock to the proposed enclosure is not expected to cause any odor problems in this sparsely populated, agricultural region.

NO ACTION:

The current level of minor odors in the area from the existing 12-acre alternative livestock facility and other agricultural activities would remain the same under the No Action alternative.

CUMULATIVE EFFECTS:

No cumulative effects on air resources are expected as a result of the Proposed Action.

COMMENTS:

No stipulations or mitigation measures are required or recommended for air resources.

REFERENCES:

Montana Department of Environmental Quality (DEQ). 1997. Montana Air Quality Non-Attainment Areas. Revised January 1997.

3. WATER RESOURCES Will Proposed Action result in:	Impact				Can Impact Be Mitigated	Comment Index
	Unknown	None	Minor	Potentially Significant		
a. Discharge into surface water or any alteration of surface water quality including but not limited to temperature, dissolved oxygen or turbidity?			X		Yes	3(a)
b. Changes in drainage patterns or the rate and amount of surface runoff?			X		Yes	3(b)
c. Alteration of the course or magnitude of floodwater or other flows?		X				
d. Changes in the amount of surface water in any water body or creation of a new water body?		X				
e. Exposure of people or property to water related hazards such as flooding?		X				
f. Changes in the quality of groundwater?			X		Yes	3(f)
g. Changes in the quantity of groundwater?		X				
h. Increase in risk of contamination of surface or groundwater?		X				
I. Effects on any existing water right or reservation?		X				
j. Effects on other water users as a result of any alteration in surface or groundwater quality?		X				
k. Effects on other users as a result of any alteration in surface or groundwater quantity?		X				

AFFECTED ENVIRONMENT:

The proposed expansion of the Sandelin Velvet Ridge alternative livestock site is located in the Stillwater River Valley approximately 12 miles northwest of Whitefish. Average annual precipitation at Whitefish for the period 1948 to 2000 is 22.6 inches, and average total snowfall is 74 inches/year (Western Regional Climate Center, 2000). The proposed enclosure is located about ½-mile east of the Stillwater River and ¼-mile east of Tamarack Creek (tributary of Stillwater River) (Figures 1 and 2). During spring runoff, overland flow can drain west-northwest from the site toward Tamarack Creek. A spring feeds a man-made pond located just outside of the proposed enclosure (Figure 2). A ditch is located along the western side of the proposed fenceline that intercepts shallow groundwater in this area. This portion of the enclosure also has 2 to 5 acres of wetlands. General geologic and hydrologic conditions in the region are described by Johns (1970) and Spratt & Associates (1991). A hydrologic evaluation of the existing 12-acre facility was performed by RLK Hydro, Inc. (1997).

The Stillwater River in the vicinity of the proposed alternative livestock site is included on the Montana Department of Environmental Quality (DEQ, 2000) Total Maximum Daily Load (TMDL) list (i.e., Section 303(d) list). This list shows that the lower section of river adjacent to and downstream of the alternative livestock site (44.1-mile reach of B-2 use classification) is impaired for aquatic life, cold water fisheries, and drinking water. The impairment is caused by phosphorus, nitrate, siltation, and other habitat alterations from land development, other urban runoff, and riparian vegetation removal (DEQ, 2000).

Water for alternative livestock would be obtained from the man-made ditch located along the west side of the proposed enclosure (Figure 2) and one or more stock ponds to be constructed in the central and/or eastern portions of the proposed enclosure. Numerous water rights are held for groundwater wells and surface water (Tamarack Creek and Stillwater River) within a mile of the proposed alternative livestock facility (Montana Department of Natural Resources and Conservation (DNRC), 2000). Most of the wells are located north, south, and west of the site and are used for domestic, irrigation, and stock watering purposes. Well records on-file with the DNRC and Montana Bureau of Mines and Geology (MBMG, 2000), and a report by RLK Hydro, Inc. (1997) indicate that most wells in the area are completed in principal water-bearing zones 50 to 150 feet below ground surface. Approximately five private water wells are located in the western half of Section 13, west of the proposed alternative livestock facility.

Direction of groundwater flow in the vicinity of the proposed alternative livestock facility is northwesterly toward Tamarack Creek and the Stillwater River. Depth to unconfined groundwater in unconsolidated alluvial and glacial sediments in the western portion of the proposed enclosure near the valley bottom is relatively shallow (10 to 30 feet). Depth to the primary water-producing zone (bedrock) ranges from 50 to 100 feet (RLK Hydro, Inc., 1997). During the spring runoff period, sediment in low-lying areas along the west side of the proposed enclosure can become saturated, resulting in standing water on the surface and surface water that can leave the enclosure area.

PROPOSED ACTION:

3(a) & 3(b) – Increased runoff and erosion could occur in some areas of the proposed expansion area if the stocking rate exceeds the carrying capacity of the pasture and vegetative cover is diminished. The proposal to pasture up to 160 alternative livestock on the 80-acre site with supplemental feed available would be expected to reduce vegetative cover to some extent (see next section - *Vegetation*). Areas of the proposed enclosure that would be most susceptible to erosion problems are on the saturated soils found in the northwest corner of the enclosure. Some of the steeper slope areas also could experience erosion if alternative livestock traffic is considerable in these areas. Any runoff from the proposed enclosure would leave the western side of the fence line in the relatively flat valley bottom (Figure 2). Runoff from the southern portion of the enclosure would enter the pond outside the fence line, and from the northern portion, would enter the ditch along the inside of the fence line (Figure 2). Therefore, surface water runoff is not expected to leave the immediate area, except during extreme precipitation events and snowmelt in Spring.

If vegetative cover is reduced significantly, the operation could meet the definition of an "animal feeding operation" (ARM 17.30.1304(3)). If water containment structures are needed on the project site to control runoff and do not have the capacity for the 25-year, 24-hour storm, a "concentrated animal feeding operations" (CAFO) permit must be obtained from Montana DEQ to permit the discharge. The alternative livestock fence would not cross any perennial drainages. Filling or dredging of any waters of the U.S., including wetlands, may require a "404 Permit" from the U.S. Army Corps of Engineers (COE).

3(f) – Alternative livestock fecal matter and nutrient-enriched water may have a minor effect on the quality of groundwater and/or surface water in the vicinity of the proposed alternative livestock facility, primarily during periods of snow-melt and major precipitation events. As stated above, however, normal surface runoff would not leave the immediate vicinity of the proposed enclosure. Groundwater impacts would be minimal due to the low-permeable clayey glacial deposits and confined or semi-confined conditions. On-site disposal of dead alternative livestock would be regulated by DoL under ARM 32.4.1002. Potential transport of

pathogens from the proposed enclosure into surface water is discussed in the following *Risk/Health Hazards* section (section no. 8).

NO ACTION:

Current hydrologic conditions are not expected to change under the No Action alternative; alternative livestock would continue to graze in the existing 12-acre alternative livestock facility if the proposed expansion is not approved and completed.

CUMULATIVE EFFECTS:

The existing alternative livestock facility, in combination with the proposed expansion, could result in up to 180 alternative livestock on 92 acres. As a result, cumulative impacts to water resources would develop if the maximum stocking rate is attained; however, the magnitude of these effects would likely be minor on a cumulative basis.

COMMENTS:

Due to potential minor impacts identified above from increased runoff and fecal matter, several mitigation measures are recommended. Other water quality protection practices may be required by the Montana DEQ if it is determined that a CAFO permit is necessary or if significant water quality problems develop. Refer to "Guide to Animal Waste Management and Water Quality Protection in Montana" (DEQ, 1996) and "Common Sense and Water Quality, A Handbook for Livestock Producers" (Montana Department of Health and Environmental Sciences, 1994) for further information on mitigation measures and CAFO permits. The following management practices are recommended to minimize the risk of discharging pollutants to state water:

REQUIRED STIPULATIONS:

None

RECOMMENDED MITIGATION MEASURES:

- Maintain a reasonable stocking rate in the area to mitigate potential impacts from runoff and fecal matter. Potential water quality impacts also could be minimized by disposing of dead animals and excess fecal material at a site that is isolated from surface water and groundwater (disposal must meet county regulations for solid waste, if applicable). On-site disposal of dead alternative livestock would be regulated by DoL under ARM 32.4.1002.

- For any areas that may have erosion and sedimentation problems, utilize best management practices (BMPs) where surface water could enter the ephemeral drainage channel, Tamarack Creek, and/or the Stillwater River. The BMPs may include earth berms, straw bale dikes, vegetative buffer zones, and/or silt fences to be used on a seasonal basis.

REFERENCES:

Johns, Willis M. 1970. Geology and Mineral Deposits of Lincoln and Flathead Counties, Montana. Montana Bureau of Mines and Geology, Butte, Montana, Bulletin 79. 182 pages with maps.

Montana Bureau of Mines and Geology (MBMG), 2000. Groundwater Information Center Report for Wells in Sections 12, 13, & 14 (T31N, R23W). Obtained on-line from Internet. July 2000.

Montana Department of Environmental Quality (DEQ), 2000. Draft Montana 303D List, A Compilation of Impaired and Threatened Waters in Need of Restoration. April 2000.

Montana DEQ, 1996. Guide to Animal Waste Management and Water Quality Protection in Montana. Helena, MT.

Montana Department of Health and Environmental Sciences (DHES), 1994. Common Sense and Water Quality, A Handbook for Livestock Producers. Water Quality Division. Helena, MT.

Montana Department of Natural Resources and Conservation (DNRC), 2000. Computer File Search of Water Rights. Obtained on-line from Internet. July 2000.

RLK Hydro, Inc., 1997. Potential Hydrological Impacts, Velvet Ridge Game Farm License Application, Flathead County, Montana. Prepared for Montana Fish, Wildlife & Parks.

Spratt & Associates, 1991. Groundwater Quality 1964-1990 in Principal Aquifers, Flathead County, Montana. Vol. I, Final Report, Vol. II Appendices. Flathead Conservation District, Kalispell, Montana.

Western Regional Climate Center, 2000. Monthly Climate Summary for Whitefish, Montana (248902), Period of Record: 7/1/1948 to 4/30/2000. Obtained on-line from Internet. July 2000.

4. VEGETATION Will Proposed Action result in:	Impact				Can Impact Be Mitigated	Comment Index
	Unknown	None	Minor	Potentially Significant		
a. Changes in the diversity, productivity or abundance of plant species (including trees, shrubs, grass, crops, and aquatic plants)?			X		Yes	4(a)
b. Alteration of a plant community?			X		Yes	4(b)
c. Adverse effects on any unique, rare, threatened, or endangered species?		X				
d. Reduction in acreage or productivity of any agricultural land?		X				
e. Establishment or spread of noxious weeds?			X		Yes	4(e)

AFFECTED ENVIRONMENT:

Forested land within the proposed alternative livestock enclosure consists primarily of mature Douglas-fir, lodgepole pine, and interspersed western larch. Young Douglas-fir regeneration is found in small isolated areas scattered on the upper slopes. Understory vegetation in the forested portion includes pinegrass, snowberry, common juniper, arnica, spirea, and various additional grasses and forbs. The property has been recently thinned of trees, and canopy coverage is estimated at about 40 percent; however, small 1 to 2 acre openings and skid roads are also dispersed across the area. A small area (2 to 5 acres) of brush rangeland, including some wetlands, occurs in the northwest corner of the proposed enclosure (Figure 2).

Timber harvesting and agriculture have been the primary uses in the area. Additional removal of trees is possible. There were no federally-listed threatened or endangered plant species observed within the proposed alternative livestock site. The proposed enclosure area does contain some noxious weeds (e.g., Canada thistle), especially in previously logged areas and along skid roads.

Forage production for the proposed expansion area is estimated at 1,000 to 1,200 pounds per acre; therefore, total forage for the proposed 80-acre expansion area is about 80,000 to 96,000 pounds (40 to 48 tons) on an annual basis. For the combined area of 92 acres, total annual forage is about 92,000 to 110,400 pounds (46 to 55 tons).

PROPOSED ACTION:

4(a) – The Proposed Action would result in up to 160 alternative livestock on 80 acres for year-round occupation. Forage consumption over a 1-year period for 110 adult elk would be approximately 396,000 pounds (200 tons). The additional 50 head of deer, caribou, goats, and/or sheep would add about another 110,000 pounds (55 tons) of forage consumption annually. Total forage needs for the maximum number of alternative livestock proposed by the applicants (160 animals), therefore, would be approximately 500,000 pounds or 250 tons per year. Thus, the 80-acre alternative livestock site would supply about 20 percent of forage needs for the alternative livestock when fully stocked. This stocking rate of about two animals per acre is considered high given vegetative conditions at the site. This scenario would contribute to a long-term decline of vegetation resources within the enclosure. Supplemental feed would also be used to help sustain the animals during the non-growing season.

4(b) – There are no plans to alter native plant communities on the proposed alternative livestock site. Areas where alternative livestock are fed or handled are more susceptible to vegetation loss. There likely would be a slow decline in palatable plant species as full capacity is reached. Under intensive grazing, there would be a shift from perennial palatable plants to annual forbs and grasses. Alternative livestock also would damage the lower portions of trees within the enclosure and result in some long-term reduction in tree numbers.

4(e) – Noxious weeds were apparent at this site and, under an intensive grazing regime, these weeds would be expected to increase in abundance. Weeds could spread quickly to disturbed areas around any site that alternative livestock are fed or handled. Weed seeds could also potentially be imported into the area with elk/deer feed.

NO ACTION:

Current vegetative communities are not expected to change appreciably for the No Action alternative.

CUMULATIVE EFFECTS:

As a result of the nearby 12-acre alternative livestock operation, cumulative impacts to vegetation could develop if the maximum stocking rate is attained; however, the magnitude of these effects is expected to be minor on a cumulative basis.

REQUIRED STIPULATIONS:

None

RECOMMENDED MITIGATION MEASURES:

- Monitor the proposed alternative livestock site for invasion of noxious weeds and treat affected areas in a timely manner. Should noxious weeds continue to be detected, a weed control program should be implemented, if not already in place, to control weeds.

- Provide certified weed-free supplemental feed and minerals to the alternative livestock on a seasonal basis to reduce excessive grazing on preferred pasture plants.

- Create/utilize interior pastures such that rotational grazing strategies can be implemented to reduce adverse impacts to vegetation. In particular, allow only seasonal use of saturated soil in wetland areas.

5. FISH & WILDLIFE Will Proposed Action result in:	Impact				Can Impact Be Mitigated	Comment Index
	Unknown	None	Minor	Potentially Significant		
a. Deterioration of critical fish or wildlife habitat?			X		No	5(a)
b. Changes in the diversity or abundance of game animals or bird species?				X	Yes	5(b)
c. Changes in the diversity or abundance of nongame species?		X				
d. Introduction of new species into an area?		X				
e. Creation of a barrier to the migration or movement of animals?			X		No	5(e)
f. Adverse effects on any unique, rare, threatened, or endangered species?		X				
g. Increase in conditions that stress wildlife populations or limit abundance (including harassment, legal or illegal harvest or other human activity)?			X		Yes	5(g)

AFFECTED ENVIRONMENT:

The proposed expansion site and surrounding land is used by white-tailed deer, elk, moose, and mule deer during all or parts of the year. Winter range for white-tailed deer has been delineated adjacent and to the south and east of the property (Figure 3). Elk also use the area during some winters, and known elk and mule deer winter range is located approximately 2 miles from the property on the north shore of Whitefish Lake and 2 miles southeast of the property to the south of Beaver Lake (Figure 3). Moose likely are transient in the area during part of the year. Other wildlife species known or expected to use the area, at least on a transient basis, include black bear, mountain lion, coyote, and fox. Gray wolves (Whitefish wolf pack home range), bald eagles, grizzly bears, and lynx are federally-listed as threatened or endangered and may also be transient through the general area (Tim Thier, FWP, pers. comm., 2000). The Stillwater River is a trout fishery in the vicinity of the proposed alternative livestock operation.

PROPOSED ACTION:

5(a) – The proposed alternative livestock expansion site is located within white-tailed deer winter range, and is located in habitat for elk, moose, and mule deer. The exclusion of wild deer from 80 acres would displace a few resident deer from habitat near Tamarack Creek and the Stillwater River. The proposed alternative livestock operation could increase the amount of sediment and nutrients to these streams; however, normal surface runoff would be contained in the immediate area of the enclosure. As a result, the magnitude of these impacts is expected to be minor.

5(b) – The exclusion of wild deer from 80 acres would displace a few resident deer from habitat near the Stillwater River. The proposed and existing adjacent alternative livestock enclosures have the potential to disrupt normal movement and increase deer mortality during severe winters. These two factors can influence the diversity and abundance of big game species in this area to a minor degree.

There is a possibility that wild deer or elk could enter the proposed facility, especially during periods of deep snow accumulation or drifting in winter. Deer may also be able to crawl under game-proof fencing at sites dug by coyotes, though this is not considered likely under normal circumstances. Fence integrity may be compromised due to trees falling in proximity to the perimeter fence. Areas where the perimeter fence crosses steep slopes (>50 percent or 30 degrees) at a direction that is not perpendicular to slope contours can result in effective fence heights that are less than 8 feet (unless fence height is increased).

Wild elk and/or deer may be attracted to the alternative livestock and may try to enter the facility, especially during the mating season. Wild deer and elk entering the proposed facility would likely be destroyed rather than released back to the wild to reduce any chance of disease transmission to wild herds. The licensee may request FWP to conduct disease testing, at the licensee's expense, of the ingressed animals to assure no disease exposure has occurred. A loss of vegetative cover due to intensive grazing by alternative livestock on 80 acres would slightly reduce nesting success for local ground nesting birds in this area.

Mountain lions, bears, wolves, and coyote could potentially pass through this area and may be attracted to the alternative livestock. Should a predator enter the enclosure, live capture and removal of the trespassing animal is possible; however, this is not without risks to the animal. Some predators that enter the enclosure could be killed.

A potentially significant concern regards the escape of captive elk and the potential for interbreeding of wild elk with domestic elk whose genetic make-up has been altered through several generations of selective breeding or through interbreeding with domestic red-deer. Although red deer are now prohibited species in Montana, historically some alternative livestock operators did bring red-deer or red-deer hybrids into their facilities. The concern regarding red deer hybrids is partially mitigated through current regulations. All elk placed on a proposed alternative livestock facility are required to be tested for red-deer genes prior to movement to the facility. The required elk/red-deer hybrid test, however, may not effectively identify red-deer hybrids if the animal is more than two generations removed from a pure red-deer parent. Fencing requirements and stipulations included in this EA would limit the potential for ingress and egress resulting in a low probability for ingress or egress and resulting interbreeding to occur. The additional fencing requirements included in this EA as stipulations are expected to reduce potentially significant impacts to the level of "minor". Although the impact of genetic pollution on wild elk herds is unknown, the effect is undesirable in terms of maintaining the genetic integrity of existing populations.

5(e) – The proposed enclosure would create a partial barrier to the movement of wild deer, elk, moose, and bear near the Stillwater River (Figure 3). The proposed alternative livestock enclosure would extend about ½-mile across the foothills along the east side of the Stillwater River valley bottom.

5(g) – Construction of the enclosure would result in conditions that increase stress on a relatively minor basis to deer living in this area by eliminating some habitat.

NO ACTION:

No wildlife-related impacts are expected to occur under the No Action alternative. The existing 12-acre alternative livestock facility likely would continue in operation.

CUMULATIVE EFFECTS:

As a result of the adjacent alternative livestock enclosure, cumulative impacts to wildlife/fisheries would occur; although the existing facility adds only 12 acres to the total area of the proposed 80-acre enclosure. The magnitude of these effects on fish and wildlife is expected to be minor on a cumulative basis.

COMMENTS:

The following stipulations are imposed to mitigate a potentially significant risk to fence integrity and the resulting potential for ingress/egress of alternative livestock and wildlife. Without these requirements, risk to wildlife from contact with alternative livestock would have the potential to be significant, due to the site being located in an area currently used by wild game and predators. Regular fence monitoring and a written fence monitoring plan are required so that FWP has a level of confidence that potential fence integrity problems can be detected promptly before ingress/egress problems occur.

REQUIRED STIPULATIONS:

1. Licensee shall inspect the perimeter fence on a regular basis (e.g., weekly) and immediately after or during events that have a greater probability of damaging the fence (e.g., wind storms and significant precipitation events) to ensure fence integrity with respect to falling trees, surface water runoff, burrowing animals, predators, and other game animals. Fence inspection shall follow a written fence monitoring plan that is submitted to and approved by FWP prior to issuance of the license. If major repairs are required of the perimeter fence due to falling tree(s) or heavy runoff, no alternative livestock shall be placed back into the affected pasture(s) until the fence is inspected for game-proof condition by a FWP representative. Additional remedial actions may be required by FWP if ingress or egress occurs at the facility.

2. Upon concurrence with a FWP representative, perimeter fence height shall be increased to a minimum of 10 feet in areas of steep slopes (>50 percent or 30 degrees).

3. The applicants shall submit and obtain FWP approval prior to licensing for a plan to address snow accumulation. The plan shall provide for an increased fence height of 10 feet along any portion of the perimeter fenceline that may experience continued snow accumulation during a typical winter. Other suitable measures can be proposed to control the height of packed snow along the perimeter fence.

RECOMMENDED MITIGATION MEASURES:

The following management practices will help to minimize impacts to free-ranging wildlife species. Implementing these mitigation measures, most of which are standard practices, is highly recommended.

- Store feed away from exterior fences or enclose in containers or buildings.
- Feed alternative livestock at interior portions of the enclosure and not along the perimeter fence.
- Remove dead animals, excess fecal material, and waste feed from the alternative livestock facility and deposit at a site not likely to be used by humans or domestic and wild animals.
- Set back perimeter fence at least 50 feet from state-owned land in areas of large trees to reduce potential risk of trees falling on fence.

SUMMARY OF POTENTIAL IMPACTS TO WILDLIFE:

1) Wildlife use of the area and potential for through-the-fence contact with alternative livestock (consider year-round use, traditional seasonal habitat use, and location of travel routes and migration corridors).

Given year-round use of the area by deer and elk, the potential for nose-to-nose contact through the fence exists and would increase during the winter months. This risk of contact can be reduced by feeding alternative livestock at interior portions of enclosures rather than along exterior fences, and by closely monitoring exterior fences on a frequent basis.

Frequency of fence line contact between alternative livestock and wildlife and the risk that this contact might result in disease transmission is mitigated by disease testing requirements. In order for disease transmission to occur, the organism causing the disease needs to be present. Any alternative livestock introduced to this proposed facility would be tested disease-free for brucellosis and tuberculosis prior to movement to the facility, so the likelihood of transmission from domestic to wild animals is minimal.

2) Potential for escape of alternative livestock or ingress of wildlife (consider site-specific factors that could reduce the effectiveness of perimeter fences built to the standards outlined in Rule 12.6.1503A, including steepness of terrain, winter snow depths/drifting, susceptibility of fences to flood damage, etc.).

The proposed exterior fence alignment would follow moderate-gradient slopes (20 to 40 percent), with steeper portions of up to 100 percent along the east fenceline. Typically, winter snow depths in this area can reach several feet, but usually are 1 to 2 feet at any given time. Blowing and drifting snow can also increase packed snow depths. A considerable number of trees along the fence line also have the potential to affect fence integrity, especially after strong wind storms.

3) Proportion (%) of the total habitat area currently used by wildlife that will be enclosed or otherwise impacted.

Wildlife currently use many thousands of acres in the area, even during the more restricted winter months. The proportion of habitat excluded by the proposed facility constitutes far less than 1 percent of the area.

REFERENCES:

Thier, Tim, 2000. Wildlife Biologist with Montana Fish, Wildlife & Parks. Personal Communication with Pat Mullen of Maxim Technologies, Inc. July 2000.

B. HUMAN ENVIRONMENT

6. NOISE & ELECTRICAL EFFECTS Will Proposed Action result in:	Impact				Can Impact Be Mitigated	Comment Index
	Unknown	None	Minor	Potentially Significant		
a. Increase in existing noise levels?		X				
b. Exposure of people to serve or nuisance noise levels?		X				
c. Creation of electrostatic or electromagnetic effects that could be detrimental to human health or property?		X				
d. Interference with radio or television reception and operation?		X				

AFFECTED ENVIRONMENT:

The area surrounding the proposed alternative livestock facility is sparsely populated. The existing 12-acre alternative livestock facility is located on the west side of the proposed enclosure.

PROPOSED ACTION:

No adverse impacts to existing noise levels are expected from the Proposed Action. No electrical effects would occur as a result of the proposed facility.

NO ACTION:

No changes in existing noise levels or electrical effects are expected for the No Action alternative.

CUMULATIVE EFFECTS:

The existing 12-acre alternative livestock facility, in combination with the proposed expansion, could result in up to 180 alternative livestock on 92 acres. The magnitude of these cumulative noise effects is expected to be minor.

REQUIRED STIPULATIONS:

None

COMMENTS:

No stipulations or mitigation measures are required or proposed as a result of noise or electrical effects.

7. LAND USE Will Proposed Action result in:	Impact				Can Impact Be Mitigated	Comment Index
	Unknown	None	Minor	Potentially Significant		
a. Alteration of or interference with the productivity or profitability of the existing land use of an area?		X				
b. Conflicted with a designated natural area or area of unusual scientific or educational importance?		X				
c. Conflict with any existing land use whose presence would constrain or potentially prohibit the proposed action?		X				
d. Conflict with any existing land use that would be adversely affected by the proposed action?		X				
e. Adverse effects on or relocation of residences?	X				NA	7(e)

AFFECTED ENVIRONMENT:

Most land in the vicinity of the proposed alternative livestock site is used for timber harvesting and agriculture. Sparse housing also occurs primarily west and north of the proposed enclosure. The Stillwater River receives some public fishing use. State-owned public land (Stillwater Forest) is located immediately east of the alternative livestock site (Figure 1). Federal forest land is located approximately 2 miles west of the alternative livestock site (Figure 1). These public lands typically are used by local residents for recreational purposes (mostly hunting and fishing) and leased for some grazing activities. The proposed alternative livestock site apparently is not zoned for any specific use. Highway 93 is located approximately ½-mile west of the project site. A powerline corridor easement extends through the existing 12-acre enclosure.

PROPOSED ACTION:

7(e) – The proposed alternative livestock operation would be compatible with existing agricultural land uses, including forestry. Potential effects of the alternative livestock facility on adjacent property values are difficult to evaluate because some nearby owners or residents may like the idea of an alternative livestock facility, whereas others would find it undesirable.

NO ACTION:

Under the No Action alternative, historic uses for the area (e.g., timber harvesting, residential, and agriculture) would likely continue.

CUMULATIVE EFFECTS:

No cumulative effects would occur to land use due to the adjacent 12-acre alternative livestock facility.

COMMENTS:

No stipulations or mitigation measures are required or recommended for land use.

8. RISK/HEALTH HAZARDS Will Proposed Action result in:	Impact				Can Impact be Mitigated	Comment Index
	Unknown	None	Minor	Potentially Significant		
a. Risk of dispersal of hazardous substances (including, but not limited to chemicals, pathogens, or radiation) in the event of an accident or other forms of disruption?			X		Yes	8(a)
b. Creation of any hazard or potential hazard to domestic livestock?			X		Yes	8(b)
c. Increased risk of contact and disease between elk ranch animals and wild game?				X	Yes	8(c)
d. Creation of any hazard or potential hazard to human health?			X		Yes	8(d)

AFFECTED ENVIRONMENT:

See Section 3 (*Water Resources*), Section 5 (*Fish & Wildlife*), and Section 7 (*Land Use*) for information that describes the affected environment with respect to this section (*Risk/Health Hazards*). It should be noted that public shooting of alternative livestock is not proposed by the applicant at the Velvet Ridge facility.

PROPOSED ACTION:

8(a) – There is potential for transmission of water-borne disease pathogens, if present, to be transported downstream from the facility via runoff into Tamarack Creek and the Stillwater River. However, as described in the *Water Resources* section, surface water runoff out of the enclosure generally occurs only during extreme precipitation events and snowmelt in the Spring. The DoL currently conducts disease monitoring and testing for brucellosis and tuberculosis. Brucellosis has not occurred on any alternative livestock ranch in Montana. At this time, Montana is classified as a Brucellosis Class Free State; this disease does not exist in alternative livestock or traditional livestock in Montana.

At this time, Montana is classified as a Tuberculosis Accredited Free State; this disease does not exist in alternative livestock or traditional livestock in Montana. Chronic wasting disease (CWD) has been detected in alternative livestock and free-ranging deer and elk in several states or provinces. CWD has been affecting wild deer and elk in Colorado and Wyoming for at least 17 years. Through the surveillance placed on all alternative livestock operations by DoL in April 1999, CWD was detected in a Montana alternative livestock facility. The CWD affected herd was depopulated. All Montana alternative livestock 16 months of age or older that die, are subject to mandatory testing for CWD.

Risk of disease transmission can be mitigated through the existing CWD surveillance of Montana alternative livestock. The DoL's CWD regulations provide requirements for mandatory surveillance, and enhancement of trace-back and observation capabilities. The mandatory 5 years of CWD surveillance prior to importation into Montana minimizes the risk of introduction of additional cases into the state. Route of CWD transmission at this time is unknown; therefore, the potential for transmission by soil, water or other media into receptor animals cannot be determined.

8(b) – The risk of disease being passed from domestic elk and deer to domestic livestock would be further mitigated if fence integrity is maintained and the stipulations and/or mitigation measures described in this EA are followed. Potential for disease transmission to domestic livestock from alternative livestock is additionally mitigated through DoL disease testing requirements. All animals to be placed on this facility are required to be tested for tuberculosis and brucellosis at the time of import, purchase and/or transportation to the ranch. Montana is presently a tuberculosis-free and brucellosis-free state (i.e., these diseases have not been diagnosed in domestic livestock). Each alternative livestock facility is required to have access to an isolation

pen (quarantine facility) on the facility or approved quarantine plan to isolate any animals that are imported or become ill. The state veterinarian can require additional testing and place herds under strict quarantine should problems arise. In addition to the standard requirements for alternative livestock ranches, and the additional stipulations and suggested mitigation measures proposed in this EA, it should be noted that there are significant economic incentives for the applicant to follow best management practices. The inadvertent acquisition of diseased animals would risk a substantial investment in breeding stock and the facilities required to maintain those animals. There is currently no evidence of CWD transmission to domestic livestock.

8(c) – Fence integrity must be maintained to minimize the potential for ingress and egress, and potential disease transmission. Tree wind-throw, steep slopes, and snow accumulation along the perimeter fence have the potential to significantly affect fence integrity. Standard fencing requirements and the required stipulations specified in this EA would substantially reduce potential for ingress and egress.

8(d) – There is a minor risk of infection to hunters who field dress deer or elk infected with tuberculosis or brucellosis. Routine brucellosis and tuberculosis testing requirements for alternative livestock offer a measure of surveillance that minimizes that risk. Failure to comply with these requirements is grounds for license revocation. Hunters routinely kill wild mule deer and elk in areas of Wyoming and Colorado where CWD is known to occur. To date, there have been no confirmed cases of CWD transmission to humans.

Another potential minor risk to human health would be the attraction of predators to the proposed enclosure and the proximity of residences to the site. Therefore, increased encounters between predators (e.g., mountain lions, coyotes, and bears) and humans or their vehicles could occur as a result of the expanded enclosure area.

NO ACTION:

Risk/health hazards would not occur from the No Action alternative, other than those that may be associated with the existing land use.

CUMULATIVE EFFECTS:

As a result of the existing 12-acre alternative livestock facility, cumulative risk/health hazards could develop; however, the magnitude of these effects is expected to be minor on a cumulative basis.

REQUIRED STIPULATIONS:

See stipulations in Section 5 (*Fish & Wildlife*).

RECOMMENDED MITIGATION MEASURES:

The mitigation measures recommended in Section 5 (*Fish & Wildlife*) are applicable to this section. In addition, risk of disease epidemic or heavy parasite infections among domestic elk or deer can be minimized by maintaining a reasonable domestic elk and deer stocking rate in relation to the enclosure size, periodic removal of manure from concentration areas, and development of a disease immunization and parasite treatment protocol as applicable to alternative livestock.

9. COMMUNITY IMPACT Will Proposed Action result in:	Impact				Can Impact be Mitigated	Comment Index
	Unknown	None	Minor	Potentially Significant		
a. Alteration of the location, distribution, density, or growth rate of the human population of an area?		X				
b. Alteration of the social structure of a community?		X				
c. Alteration of the level or distribution of employment or community or personal income?		X				
d. Changes in industrial or commercial activity?		X				
e. Changes in historic or traditional recreational use of an area?		X				
f. Changes in existing public benefits provided by affected wildlife populations and wildlife habitats (educational, cultural or historic)?		X				
g. Increased traffic hazards or effects on existing transportation facilities or patterns of movement of people and goods?		X				

AFFECTED ENVIRONMENT:

The proposed alternative livestock facility is located in a sparsely populated area of Flathead County, approximately 12 miles northwest of Whitefish. State-owned land immediately east of the project area is used primarily by local residents (Figure 1).

PROPOSED ACTION:

Some local residents may feel the alternative livestock operation would decrease their quality of life. Neighbors harboring negative feelings about the operation would perceive a loss in their sense of social well-being. However, some neighbors and local residents may like the idea of an alternative livestock facility and enjoy viewing the elk, deer, or other alternative livestock. These people may feel the facility would add to their quality of life and sense of well-being.

NO ACTION:

Although there would be no expanded alternative livestock facility as proposed by the applicants with the No Action alternative, denial of the application may be welcomed by those who may be opposed to it, if any. Ill feelings, however, may be harbored by people who may favor the facility.

CUMULATIVE EFFECTS:

Cumulative effects on the community are expected to be negligible as a result of the existing and proposed alternative livestock operations.

COMMENTS:

No stipulations or mitigation measures are required or recommended.

10. PUBLIC SERVICES & TAXES Will Proposed Action result in:	Impact				Can Impact be Mitigated	Comment Index
	Unknown	None	Minor	Potentially Significant		
a. A need for new or altered government services (specifically an increased regulatory role for FWP and Dept. of Livestock)?			X		NA	10(a)
b. A change in the local or state tax base and revenues?			X		NA	10(b)
c. A need for new facilities or substantial alterations of any of the following utilities: electric power, natural gas, other fuel supply or distribution systems, or communications?		X				

AFFECTED ENVIRONMENT:

The applicants currently pay property taxes for the land proposed for the alternative livestock site, and would pay taxes on the animals after they are placed on the site. Prevailing land use within the proposed enclosure site is forestry, which has a relatively low average appraisal value.

PROPOSED ACTION:

10(a) – Approval of the alternative livestock facility would increase time and expenses spent by FWP and DoL personnel inspecting and monitoring the operation. The proposed enclosure, however, is located next to the existing 12-acre licensed alternative livestock facility owned and operated by the applicants. Since neither FWP or DoL has the option of hiring additional employees to handle the increased workload that could potentially be created by the facility, activities of the current staff may need to be re-prioritized to meet the increased demand created by operation.

10(b) – Placing alternative livestock in the proposed facility would increase the annual tax contribution from the property, with collected taxes going toward the state, county, and local school district. Elk placed on the proposed facility may originate from the existing facility where the Class 6 property tax and per capita tax on the animals currently are being paid. However, additional Class 6 taxes and per capita taxes would be paid for any alternative livestock born on the facility or the proposed expansion when age eligible, with the Class 6 taxes collected going to the local county and the per capita taxes going to the state. The expansion would allow for more animals to be born on the facility; therefore, the annual tax contribution from Class 6 and per capita taxes would increase.

NO ACTION:

Under the No Action alternative, FWP and DoL would not have to inspect and monitor this alternative livestock facility; however, they would still periodically monitor the existing 12-acre facility. The current status of tax payments for this property would remain for the No Action alternative.

CUMULATIVE EFFECTS:

No cumulative impacts are expected on public services and taxes from the proposed alternative livestock expansion project, other than the taxes mentioned above.

COMMENTS:

No stipulations or mitigation measures are required or recommended.

11. AESTHETICS & RECREATION Will Proposed Action result in:	Impact				Can Impact be Mitigated	Comment Index
	Unknown	None	Minor	Potentially Significant		
a. Alteration of any scenic vista or creation of an aesthetically offensive site or effect that is open to public view?	X				NA	11(a)
b. Alteration of the aesthetic character of a community or neighborhood?		X				
c. Alteration of the quality or quantity of recreational/tourism opportunities and settings?	X				NA	11(a)

AFFECTED ENVIRONMENT:

The proposed alternative livestock site is located ½-mile east of Highway 93, and adjacent to the state-owned Stillwater Forest (Figure 1). Federal national forest land is located approximately 2 miles west of the project site (Figure 1). These public lands typically are used by local residents for recreational purposes (mostly hunting and fishing). The nearby Stillwater River receives some public fishing use. General access to these areas is from private and county roads. Local residents in the vicinity of the alternative livestock site appreciate their space and outdoor recreational activities.

PROPOSED ACTION:

11(a) – The presence of the alternative livestock and 8-foot high fence is not expected to result in any major adverse impact to the area's visual character or recreation opportunities. Some nearby residents may not appreciate having an 8-foot high fence to view. Persons who might enjoy viewing elk or other alternative livestock may consider the proposed facility a recreational opportunity. Any impact would be minor because the site has scattered tree cover with topographic ridges that partially or completely block the site from most surrounding areas.

NO ACTION:

No adverse impacts to aesthetics or recreation are expected under the No Action alternative.

CUMULATIVE EFFECTS:

No cumulative impacts are expected, although there is an existing 12-acre alternative livestock facility located immediately west of the proposed enclosure.

COMMENTS:

No stipulations or mitigation measures are required or recommended.

12. CULTURAL & HISTORICAL RESOURCES Will Proposed Action result in:	Impact				Can Impact be Mitigated	Comment Index
	Unknown	None	Minor	Potentially Significant		
a. Destruction or alteration of any site, structure or object of prehistoric, historic, or paleontological importance?	X				Yes	12(a)
b. Physical change that would affect unique cultural values?		X				
c. Effects on existing religious or sacred uses of a site or area?		X				

AFFECTED ENVIRONMENT:

A file search was conducted by the State Historic Preservation Office (SHPO) for the proposed project area. Results of this search show there are no previously recorded historic or archaeological sites within the designated project site (SHPO 2000). According to SHPO, the absence of cultural properties does not mean that they don't exist, but rather may reflect the lack of any previous cultural resource inventory.

PROPOSED ACTION:

12(a) – According to SHPO (2000), there is a potential for the project to impact cultural properties. It recommends that a reconnaissance survey be conducted in order to determine whether or not such sites exist and if they will be impacted.

NO ACTION:

No impacts to cultural resources are expected from the No Action alternative unless other disturbances occur within the property.

CUMULATIVE EFFECTS:

No additional impacts from past, present and reasonably foreseeable activities near the proposed alternative livestock facility are anticipated. There are no known cultural resources in the existing 12-acre alternative livestock facility located west of the proposed enclosure.

REQUIRED STIPULATIONS: None.

RECOMMENDED MITIGATION MEASURES:

If archeological artifacts are observed during construction of the facility fence or from other activities, work should stop in the area and the discovery reported to:

Montana Historical Society; Historic Preservation Office
1410 8th Avenue; P.O. Box 201202; Helena, Montana 59620; phone (406) 444-7715

If work stoppage in the area containing observed artifacts is not possible, record the location and position of each object, take photographs and preserve the artifact(s).

REFERENCES:

Montana State Historic Preservation Office (SHPO), 2000. Letter from Phillip Melton (SHPO, Helena, MT) to Nancy Ivy (Montana Fish, Wildlife & Parks), dated May 22, 2000.

C. SUMMARY

13. SUMMARY Would Proposed Action, considered as a whole:	Impact				Can Impact be Mitigated	Comment Index
	Unknown	None	Minor	Potentially Significant		
a. Have impacts that are individually limited, but cumulatively considerable? (A project or program may result in impacts on two or more separate resources which create a significant effect when considered together or in total)		X				
b. Involve potential risks or adverse effects which are uncertain but extremely hazardous if they were to occur?				X	Yes	13(b)
c. Potentially conflict with the substantive requirements or any local, state, or federal law, regulation, standard or formal plan?		X				
d. Establish a precedent or likelihood that future actions with significant environmental impacts would be proposed?	X					13(d)
e. Generate substantial debate or controversy about the nature of the impacts that would be created?			X		Yes	13(e)

PROPOSED ACTION:

13(b) – Refer to discussions in Section 5 (Fish/Wildlife) and in Section 8 (*Risk/Health Hazards*).

13(d) – The precedent for permitting alternative livestock ranches with the knowledge that there are some uncertainties about the potential risk of disease transmission between captive and wild animals already is established. The alternative livestock industry is established in Montana and the legislature recognizes that the production of alternative livestock provides a viable economic opportunity for any private property owner as well as the traditional livestock producers who are interested in diversifying their ranch productivity (MCA 87-4-431). Statutes and regulations that govern the industry presume that it is appropriate to permit new operations, with reasonable restrictions to protect Montana's interests in its resident wildlife.

13(e) – Montana FWP and DoL acknowledge that the permitting of alternative livestock ranches generates public controversy. Some issues are particularly controversial when alternative livestock facilities block migration routes or consume significant areas of land historically utilized by wild game. Because the proposed expansion of Sandelin's Velvet Ridge alternative livestock facility would not significantly block big game migration routes or consume a significant portion of land utilized by wild game, the controversial nature of the Proposed Action is minor.

Montana FWP and DoL also acknowledge that there are uncertainties regarding diseases of wildlife and alternative livestock, and the transmissibility of disease. The agencies agree that an outbreak of livestock disease in one or more wildlife populations would be a significant, negative effect. However, with careful attention to current regulations and implementation of the stipulations and mitigation measures specified in this EA, the transmission of disease from alternative livestock on the proposed alternative livestock ranch to wildlife is a very unlikely event.

NO ACTION:

Potential risks or adverse effects which are uncertain would not occur from the No Action alternative, other than those associated with the existing land use.

CUMULATIVE EFFECTS:

The general area is used for agriculture and forestry, with sparse housing to the north, south, and west of the proposed alternative livestock facility. The Proposed Action would expand the existing 12-acre alternative livestock facility by an additional 80 acres, and add up to 160 more alternative livestock to the total enclosure area. The existing operation is licensed for up to 20 elk on 12 acres. This existing facility, in combination with the proposed expansion, could result in up to 180 alternative livestock on 92 acres. As a result, cumulative impacts could develop; however, the magnitude of these effects is expected to be minor on a cumulative basis.

REQUIRED STIPULATIONS:

See Section 5 (*Fish & Wildlife*).

RECOMMENDED MITIGATION MEASURES:

See Section 5 (*Fish & Wildlife*).

SUMMARY EVALUATION OF SIGNIFICANCE CRITERIA

a. Does the Proposed Action have impacts that are individually minor, but cumulatively considerable? (A project may result in impacts on two or more separate resources which create a significant effect when considered together or in total).

No. A 12-acre licensed alternative livestock facility is located immediately west of the proposed facility. Cumulative impacts from these two operations, however, are expected to be minor on a cumulative basis.

b. Does the Proposed Action involve potential risks or adverse effects which are uncertain but extremely hazardous if they were to occur?

Yes. A potential risk or adverse effect that is uncertain, but extremely hazardous if it were to occur, would be the spread of a disease or parasite from domestic livestock to wild elk or deer. The risk and appropriate measures to mitigate the risk are discussed in Section 5 (*Fish & Wildlife*), Section 8 (*Risk/Health Hazards*), and Section 13 (*Summary*) of this EA.

c. Description and analysis of reasonable alternatives (including the no action alternative) to the proposed action whenever alternatives are reasonably available and prudent to consider and a discussion of how the alternatives would be implemented:

The No Action alternative would avoid many of the potential impacts listed above. This site would likely be managed for forestry. The No Action alternative would probably not exclude of wildlife from this site.

d. Evaluation and listing of mitigation, stipulation, or other control measures enforceable by the agency or another government agency:

This section provides an analysis of impacts to private property by proposed restrictions or stipulations in this EA as required under 75-1-201, MCA, and the Private Property Assessment Act, Chapter 462, Laws of Montana (1995). The analysis provided in this EA is conducted in accordance with implementation guidance issued by the Montana Legislative Services Division (Environmental Quality Council (EQC), 1996). A completed checklist designed to assist state agencies in identifying and evaluating proposed agency actions, such as imposed stipulations, that may result in the taking or damaging of private property, is included in Appendix A. Mitigation measures described in this section address both minor and significant impacts. Stipulations are designed to ensure that the fence enclosure is maintained in game-proof condition. Most potential minor impacts from the Proposed Action are addressed as mitigation measures that are recommended, but not required.

STIPULATIONS #1 - #5

1. The applicants shall submit and obtain FWP approval prior to licensing for a plan to address snow accumulation. The plan shall provide for an increased fence height of at least 10 feet along any portion of the perimeter fenceline that may be subject to excessive snow accumulation during the winter. Other suitable measures can be proposed to control the height of packed snow along the perimeter fence.

2. A 25-foot vegetative buffer zone shall be maintained between the northern perimeter of the existing 12-acre portion of the alternative livestock enclosure and the adjacent property line. (Note: the purpose of this buffer zone is to filter out sediment, nutrients, and microorganisms from runoff that may come from the enclosure area).

3. FWP and DoL have conducted a MEPA review based upon the number of alternative livestock (180) and acreage (92) specified in the license application. A supplemental MEPA review may be required if the applicant increases the number of animals above 180 or fails to fence the entire 92 acres.

4. Licensee shall inspect the perimeter fence on a regular basis (e.g., weekly) and immediately after or during events that have a greater probability of damaging the fence (e.g., wind storms and significant precipitation events) to ensure fence integrity with respect to falling trees, surface water runoff, burrowing animals, predators, and other game animals. Fence inspection shall follow a written fence monitoring plan that is submitted to and approved by FWP prior to issuance of the license. If major repairs are required of the perimeter fence due to falling tree(s) or heavy runoff, no alternative livestock shall be placed back into the affected pasture(s) until the fence is inspected for game-proof condition by a FWP representative. Additional remedial actions may be required by FWP if ingress or egress occurs at the facility.

5. Upon concurrence with a FWP representative, perimeter fence height shall be increased to a minimum of 10 feet in areas of steep slopes (>50 percent or 30 degrees).

Restriction on Private Property Use

These requirements do not restrict the use of private property by requiring the following: plan for monitoring the fence, including response to excessive snow accumulation; maintenance of a 25-foot vegetative buffer zone; regular monitoring of fence integrity; more frequent monitoring of perimeter fence during events that have a greater probability of damaging the fence; and raising the fence where snow drifts and/or steep slopes may cause ingress/egress.

Alternatives

Do not perform the monitoring and safety measures described above regarding fence integrity.

This alternative would not adequately address potential problems that may compromise fence integrity resulting in ingress/egress at the facility.

Benefits from Imposing the Stipulation

These requirements are imposed to minimize potential ingress/egress at the proposed alternative livestock facility. In addition to existing FWP fencing and wildlife protection requirements, these requirements would effectively reduce the risk of contact between alternative livestock and wildlife and domestic livestock.

Types of Expenditures the Requirement Would Mandate

Performing the measures described above as needed to maintain fence integrity would not cause a substantial increase in fence construction and facility operation costs. Raising the fence height in areas of steep slopes and where excessive snow may accumulate would not likely increase fencing costs to a significant degree. The 25-foot buffer zone is already in-place for the existing 12-acre enclosure.

Requirement's Effect on Property Values

None expected.

PART III. EA CONCLUSION

1. **Based on the significance criteria evaluated in this EA, is an EIS required? YES / NO**

   No. The appropriate level of analysis for the Proposed Action is a mitigated EA because:

   - All impacts of the Proposed Action have been accurately identified in the EA; and
   - All identified significant impacts would be mitigated to minor or none.

2. **Describe the level of public involvement for this project if any and, given the complexity and the seriousness of the environmental issues associated with the Proposed Action, is the level of public involvement appropriate under the circumstances?**

   Upon completion of the Draft EA, a notice is sent to adjoining landowners, local newspapers, and other potentially affected interests, explaining the project and asking for input during a 21-day comment period which extends from August 4, 2000 until 5 pm August 25, 2000. The Draft EA is also available to the public from the FWP addresses and phone numbers listed below and in the *Summary* section of this EA (p. 2), and through the State Bulletin Board System during the public comment period.

3. **Duration of comment period if any:** 21 days

4. **Name, title, address and phone number of the Person(s) Responsible for Preparing the EA:**

Fish, Wildlife & Parks

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APPENDIX A

PRIVATE PROPERTY ASSESSMENT ACT CHECKLIST

The 54th Legislature enacted the Private Property Assessment Act, Chapter 462, Laws of Montana (1995). The intent of the legislation is to establish an orderly and consistent process by which state agencies evaluate their proposed actions under the "Takings Clauses" of the United States and Montana Constitutions. The Takings Clause of the Fifth Amendment of the United States Constitution provides: "nor shall private property be taken for public use, without just compensation." Similarly, Article II, Section 29 of the Montana Constitution provides: "Private property shall not be taken or damaged for public use without just compensation..."

The Private Property Assessment Act applies to proposed agency actions pertaining to land or water management or to some other environmental matter that, if adopted and enforced without compensation, would constitute a deprivation of private property in violation of the United States or Montana Constitutions.

The Montana State Attorney General's Office has developed guidelines for use by state agency to assess the impact of a proposed agency action on private property. The assessment process includes a careful review of all issues identified in the Attorney General's guidance document (Montana Department of Justice 1997). If the use of the guidelines and checklist indicates that a proposed agency action has taking or damaging implications, the agency must prepare an impact assessment in accordance with Section 5 of the Private Property Assessment Act. For the purposes of this EA, the questions on the following checklist refer to the following requirements:

1. The applicants shall submit and obtain FWP approval prior to licensing for a plan to address snow accumulation. The plan shall provide for an increased fence height of 10 feet along any portion of the perimeter fenceline that may be subject to excessive snow accumulation during a typical winter. Other suitable measures can be proposed to control the height of packed snow along the perimeter fence.

2. A 25-foot vegetative buffer zone shall be maintained between the northern perimeter of the existing 12-acre portion of the alternative livestock enclosure and the adjacent property line. (Note: the purpose of this buffer zone is to filter out sediment, nutrients, and microorganisms from runoff that may come from the enclosure area).

3. FWP and DoL have conducted a MEPA review based upon the number of alternative livestock (180) and acreage (92) specified in the license application. A supplemental MEPA review may be required if the applicant increases the number of animals above 180 or fails to fence the entire 92 acres.

4. Licensee shall inspect the perimeter fence on a regular basis and immediately after or during events that have a greater probability of damaging the fence (e.g., wind storms and significant precipitation events) to ensure fence integrity with respect to falling trees, surface water runoff, burrowing animals, predators, and other game animals. Fence inspection shall follow a written fence monitoring plan that is submitted to and approved by FWP prior to issuance of the license. If major repairs are required of the perimeter fence due to falling tree(s) or heavy runoff, no alternative livestock shall be placed back into the affected pasture(s) until the fence is inspected for game-proof condition by a FWP representative. Additional remedial actions may be required by FWP if ingress or egress occurs at the facility.

5. Upon concurrence with a FWP representative, perimeter fence height shall be increased to a minimum of 10 feet in areas of steep slopes (>50 percent or 30 degrees).

PRIVATE PROPERTY ASSESSMENT ACT CHECKLIST

DOES THE PROPOSED AGENCY ACTION HAVE TAKINGS IMPLICATIONS UNDER THE PRIVATE PROPERTY ASSESSMENT ACT?

YES	NO	
X		1. Does the action pertain to land or water management or environmental regulation affecting private real property or water rights?
	X	2. Does the action result in either a permanent or indefinite physical occupation of private property?
	X	3. Does the action deprive the owner of all economically viable uses of the property?
	X	4. Does the action deny a fundamental attribute of ownership?
	X	5. Does the action require a property owner to dedicate a portion of property or to grant an easement? [If the answer is **NO**, skip questions 5a and 5b and continue with question 6.]
		5a. Is there a reasonable, specific connection between the government requirement and legitimate state interests?
		5b. Is the government requirement roughly proportional to the impact of the proposed use of the property?
	X	6. Does the action have a severe impact on the value of the property?
	X	7. Does the action damage the property by causing some physical disturbance with respect to the property in excess of that sustained by the public generally? [If the answer is **NO**, do not answer questions 7a-7c.]
		7a. Is the impact of government action direct, peculiar, and significant?
		7b. Has government action resulted in the property becoming practically inaccessible, waterlogged, or flooded?
		7c. Has government action diminished property values by more than 30% and necessitated the physical taking of adjacent property or property across a public way from the property in question?

Taking or damaging implications exist if **YES** is checked in response to question 1 and also to any one or more of the following questions: 2, 3, 4, 6, 7a, 7b, 7c; or if **NO** is checked in response to questions 5a or 5b.

If taking or damaging implications exist, the agency must comply with § 5 of the Private Property Assessment Act, to include the preparation of a taking or damaging impact assessment. Normally, the preparation of an impact assessment will require consultation with agency legal staff.